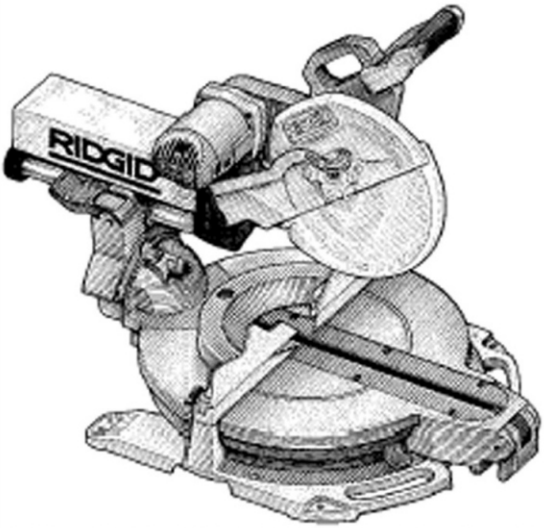
RIDGID®

MS1290LZ
OPERATORS MANUAL



12" SLIDING COMPOUND MITER SAW with EXACTLINE™

Call Us 1st

For any questions about:

- Operation
- Warranty (See back cover)
- Technical Assistance
- Repair Parts

Please have your Model Number and Serial Number on hand when calling.

1-866-539-1710

RIDGIDParts.com

POWER TOOL PARTS & ACCESSORIES

⚠ WARNING:

Read and follow all Safety Rules before first use of this product.

Part No. SP6505

Printed in Taiwan

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Safety Instructions For Miter Saw

Safety is a combination of common sense, staying alert and knowing how your miter saw works. Read this manual to understand this miter saw.

Safety Signal Words

DANGER: means if the safety information is not followed someone **will** be seriously injured or killed.

WARNING: means if the safety information is not followed someone **could** be seriously injured or killed.

CAUTION: means if the safety information is not followed someone **may** be injured.

Before Using The Saw

WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known (to the State of California) to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

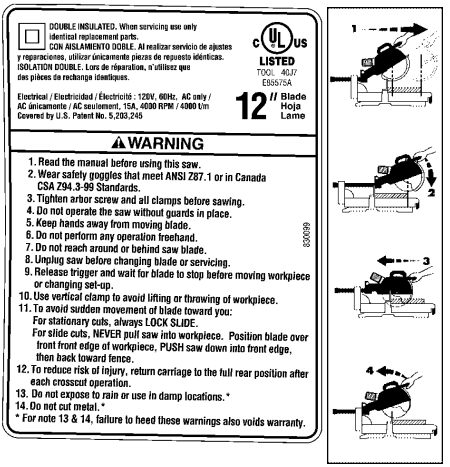
- **Lead from lead-based paints,**
- **Crystalline silica from bricks and cement and other masonry products, and**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

WARNING: To reduce the risk of mistakes that could cause serious, permanent injury, do not plug the miter saw in until the following steps have been satisfactorily completed.

- Completely assemble and align saw. (See “Assembly” and “Alignment” sections within.)
- Learn the use and function of the ON-OFF switch, upper and lower blade guards, miter lock lever, bevel lock lever, cover plate stop screw, depth adjustment clamp and head hold down, fence slide lock knobs and workpiece clamp. (See “Getting to Know Your Miter Saw” section within.)
- Review and understand all safety instructions and operating procedures in this manual.
- Review the maintenance methods for this miter saw. (See “Maintenance” section within).

Find and read the following labels on the miter saw.


DOUBLE INSULATED. When servicing use only identical replacement parts.
CON AISLAMIENTO DOBLE. Al realizar servicio de ajustes y reparaciones, utilizar únicamente piezas de repuesto idénticas.
ISOLATION DOUBLE. Lors de réparation, n'utilisez que des pièces de rechange identiques.
Electrical / Electricidad / Electricité : 120V, 60Hz, AC only / AC únicamente / AC seulement, 15A, 4000 RPM / 4000 t/m
Covered by U.S. Patent No. 5,203,245
c UL us
LISTED
TOOL - MJG
E85575A
12 // Blade Hoja Lame
WARNING
1. Read the manual before using this saw.
2. Wear safety goggles that meet ANSI Z87.1 or in Canada CSA Z94.3-99 Standards.
3. Tighten arbor screw and all clamps before sawing.
4. Do not operate the saw without guards in place.
5. Keep hands away from moving blade.
6. Do not perform any operation freehand.
7. Do not reach around or behind saw blade.
8. Unplug saw before changing blade or servicing.
9. Release trigger and wait for blade to stop before moving workpiece or changing set-up.
10. Use vertical clamp to avoid lifting or throwing of workpiece.
11. To avoid sudden movement of blade toward you:
For stationary cuts, always LOCK SLIDE.
For slide cuts, NEVER pull saw into workpiece. Position blade over front front edge of workpiece, PUSH saw down into front edge, then back toward fence.
12. To reduce risk of injury, return carriage to the full rear position after each crosscut operation.
13. Do not expose to rain or use in damp locations.*
14. Do not cut metal.*
* For note 13 & 14, failure to heed these warnings also voids warranty.
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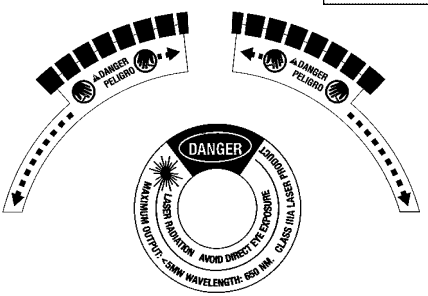


Safety Instructions for Miter Saws (continued)

When Installing Or Moving The Miter Saw

Before moving the saw, lock the miter, bevel, slide and power head positions. Unplug the power cord.

To reduce the risk of back injury, get help when you need to lift the saw.

Never carry the tool by the cord or power head trigger handle. Damage to insulation could cause an electric shock. Damage to wire connections could cause a fire.

Reduce the Risk of Dangerous Environment. Use the miter saw in a dry, location, protected from rain. Keep work area well lighted.

Place the saw so neither the user nor bystanders are forced to stand in line with the blade. Thrown debris could injure people in its path.

To reduce the risk of injury from unexpected saw movement:

- Place the miter saw on a firm level surface where there is plenty of room for handling and properly supporting the workpiece.
- Support the miter saw so the table is level and the saw does not rock.
- Bolt, screw or clamp the saw to its support.
- **Never Stand On Tool.** Serious injury could occur if the tool tips or you accidentally hit the cutting tool. Do not store anything above or near the tool where anyone might stand on the tool to reach them.

To reduce the risk of injury or death from electrical shock:

- Make sure your fingers do not touch the plug's metal prongs when plugging or unplugging the miter saw.
- This TOOL IS DOUBLE INSULATED to give you added protection. Double insulation does not take the place of normal safety precautions when operating this tool. When servicing this double insulated tool, use only identical parts.

Before Each Use

Inspect your miter saw.

Disconnect The Miter Saw. To reduce the risk of injury from accidental starting, unplug the saw, before changing the setup, changing the blade or adjusting anything.

Compare the direction of rotation arrow on the guard to the direction arrow on the blade. The blade teeth should always point downward at the front of the saw.

Tighten the arbor screw.

Tighten the cover plate stop screw.

Check For Damaged Parts. Check for:

- Proper Alignment of moving parts,
- Damaged electric cords,
- Binding of moving parts,
- Broken parts,
- Stable mounting,
- Function of arm return spring and lower guard: Push the arm all the way down, then let it rise up until it stops by itself. Check the lower guard to see if it closed fully. If it did not, follow the instructions in the "Troubleshooting" section.
- Smooth, solid movement of sliding assembly.
- Other conditions that may affect the way the miter saw works.

If any part of this miter saw is missing, bent, or broken in any way, or any electrical parts don't work, turn the saw off and unplug it. **Replace** damaged, missing, or failed parts before using the saw again.

Keep Guards In Place, in working order, and in proper adjustment.

Maintain Tools With Care. Keep the miter saw clean for best and safest performance. Follow instructions for lubricating. **DON'T** put lubricants on the blade while it's spinning.

Remove Adjusting Keys And Wrenches from tool before turning it on.

To Reduce the Risk of Injury From Jams, Slips Or Thrown Pieces

- **Use Only Recommended Accessories.** (See "Accessory" section within.) Consult this owner's manual for recommended accessories. Follow the instructions that come with the accessories. The use of improper accessories may cause risk of injury to persons.
- Choose the right 12-inch diameter blade for the saw and the material you plan to cut.
- Make sure the blade is sharp, undamaged and properly aligned. With the saw unplugged, push the power head all the way down. Hand spin the blade and check for clearance. Tilt the power head to 45 degrees left and right bevel and repeat the check. If the blade hits anything, make the adjustments shown in "Alignment (Adjustments)" section.
- Make sure the blade, arbor collars and laser system are clean.
- Make sure the arbor collars' and laser discs' recessed sides are facing the blade.
- Using the 1/4" hex end of combination wrench (supplied) or a 1/2-inch box end wrench, make sure the left hand thread arbor screw is firmly tightened counterclockwise.
- Make sure all clamps and locks are tight and there is no excessive play in any parts.
- **Keep Work Area Clean.** Cluttered areas and benches invite accidents. Floor must not be slippery.

To reduce the risk of burns or other fire damage, never use the saw near flammable liquids, vapors or gases.

Plan Ahead To Protect Your Eyes, Hands, Face and Ears

Know Your Miter Saw. Read and understand the owner's manual and labels affixed to the tool. Learn its applications and limitations as well as the specific potential hazards peculiar to this tool.

To reduce the risk of injury from accidental contact with moving parts, don't do layout, assembly, or setup work on the miter saw while any parts are moving.

To Reduce the Risk of Accidental Starting. Make sure switch is "OFF" before plugging miter saw into a power outlet.

Plan your work.

Use The Right Tool. Don't force tool or attachment to do a job it was not designed to do. Use a different tool for any workpiece that can't be held in a solidly braced, fixed position.

CAUTION: Because of the sliding action of this saw, this machine is not designed for cutting metals. Use this miter saw to cut only wood and wood like products. Other materials may shatter, bind on the blade, start fires or create other dangers.

Dress For Safety

Any power tool can throw foreign objects into the eyes. This can result in permanent eye damage. Wear safety goggles (not glasses) that comply with ANSI Z87.1 (or in Canada CSA Z94.3-99) shown on package. Everyday eyeglasses have only impact resistant lenses. They are not safety glasses. Safety goggles are available at many local retail stores. Glasses or goggles not in compliance with ANSI or CSA could seriously hurt you when they break.

Do not wear loose clothing, gloves, neckties or jewelry (rings, wrist watches) They can get caught and draw you into moving parts.

- Wear nonslip footwear.
- Tie back long hair.
- Roll long sleeves above the elbow.
- Noise levels vary widely. To reduce the risk of possible hearing damage, wear ear plugs or muffs when using miter saw for hours at a time.
- For dusty operations, wear a dust mask along with safety goggles.

Preparing to Make Cut

Inspect Your Workpiece. Make sure there are no nails or foreign objects in the part of the workpiece to be cut.

Plan your work to reduce the risk of thrown pieces caused when the workpiece binds on the blade and is torn from your hands.

Plan how you will make the cut. Always:

- Make sure the blade is not spinning.
- Raise the blade.
- Slide the saw out above the front edge of the workpiece before starting saw, and
- Push the sawblade down on top of the wood and back toward the rear of the saw to make the cut.

DANGER: NEVER pull the saw toward you during a cut. The blade can suddenly climb up on top of the workpiece and force itself toward you.

Plan The Way You Will Hold The Workpiece From Start To Finish.

- Avoid awkward operations and hand positions where a sudden slip could cause fingers or hand to move into the blade.
- **Don't Overreach.** Keep good footing and balance.
- Keep your face and body to one side of sawblade, out of line with a possible thrown piece.
- Cut only one workpiece at a time.
- Never cut **Freehand:**
  - Brace your workpiece solidly against the fence and table top so it will not rock or twist during the cut.
  - Make sure there's no debris between the workpiece and its supports.
  - Make sure no gaps between the workpiece, fence and table will let the workpiece shift after it is cut in two.
- Keep the cut off piece free to move sideways after it's cut off. Otherwise, it could get wedged against the blade and thrown violently.
- Clear everything except the workpiece and related support devices off the table before turning the miter saw on.
- **Secure Work.** Use clamps or a vise to help hold the work when it's practical.

Use extra caution with large, very small or awkward workpieces:

- Use extra supports (tables, saw horses, blocks, etc.) for any workpieces large enough to tip when not held down to the table top.
- **Never** use another person as a substitute for a table extension, or as additional support for a workpiece that is longer or wider than the basic miter saw table or to help feed, support or pull the workpiece.
- Do not use this saw to cut pieces too small to let you easily hold the work while you keep the thumb side of your index (pointer) finger against the outside edge of the fence.
- When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade and be torn from your hands. A piece of molding, for example, must lie flat against the table or fence, or be held by a fixture or jig that will not let it twist, rock or slip while being cut.
- Properly support round material such as dowel rods, or tubing. They have a tendency to roll while being cut, causing the blade to "bite." To avoid this, always use a fixture designed to properly hold your workpiece.

Whenever Saw Is Running

WARNING: Don't allow familiarity (gained from frequent use of your miter saw) cause a careless mistake. A careless fraction of a second is enough to cause a severe injury.

Before starting your cut, observe the miter saw while it runs. If it makes an unfamiliar noise or vibrates excessively, stop immediately. Turn the saw off. Unplug the saw. Do not restart until finding and correcting the problem.

Keep Children Away. Keep all visitors a safe distance from the miter saw. Make sure bystanders are clear of the miter saw and workpiece.

Safety Instructions for Miter Saws (continued)

Never confine the piece being cut off. Never hold it, clamp it, touch it, or use length stops against it while the blade is spinning. It must be free to move sideways on its own. If confined, it could get wedged against the blade and be thrown violently.

Let the blade reach full speed before cutting. This will help avoid thrown workpieces.

Don't Force Tool. It will do the job better and safer at its designed rate. Feed the saw into the workpiece only fast enough to let the blade cut without bogging down or binding.

Before freeing jammed material:

- Turn miter saw "OFF" by releasing trigger switch.
- Wait for all moving parts to stop.
- Unplug the miter saw.

After finishing a cut:

- Keep holding the power head down.
- Release the switch, and wait for all moving parts to stop before moving your hands or raising power head.
- If blade doesn't stop within 6 seconds, unplug the saw and follow the instructions in the Trouble Shooting section for fixing the blade brake before using the saw again.

Before Leaving The Saw

Never Leave Tool Running Unattended. Turn power off. Wait for all moving parts to stop.

Make Workshop Child Proof. Install a padlock through the hole provided in the trigger to prevent unauthorized usage. Lock the shop. Disconnect master switches. Store tool away from children and others not qualified to use the tool.

Glossary of Terms for Woodworking

Arbor

The shaft on which a cutting tool is mounted.

Bevel Cut

An angle cutting operation made through the face of the workpiece.

Compound Cut

A simultaneous bevel and miter cutting operation.

Crosscut

A cutting operation made across the width of the workpiece.

Dado

A non-through cut which produces a square sided notch or trough in the workpiece

Freehand

Doing a cut without holding the workpiece against both the table and fence. Most workpieces can be held down with your hand. Large or wide pieces should be clamped to the fence or table.

Gum

A sticky, sap based residue from wood products.

Heel

Misalignment of the blade.

Kerf

The amount of material removed by the blade in a through cut or the slot produced by the blade in a nonthrough or partial cut.

Miter Cut

An angle cutting operation made across the width of the workpiece.

Offal

Unsecured peice of material after making cut.

Resin

A sticky, sap based substance that has hardened.

Revolutions Per Minute (RPM)

The number of turns completed by a spinning object in one minute.

Sawblade Path

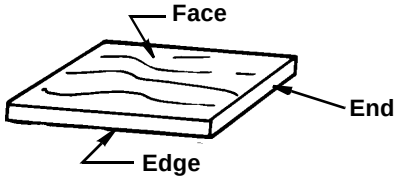
The area of the workpiece or table top directly in line with either the travel of the blade or the part of the workpiece which will be, or has been, cut by the blade.

Set

The distance that the tip of the sawblade tooth is bent (or set) outward from the face of the blade.

Workpiece

The item on which the cutting operation is being performed. The surfaces of a workpiece are commonly referred to as faces, ends, and edges.



Motor Specifications and Electrical Requirements

Power Supply and Motor Specifications

WARNING: To reduce the risk of electrical hazards, fire hazards or damage to the tool, use proper circuit protection. Your tool is wired at the factory for operation using the voltage shown. Connect tool to a power line with the appropriate voltage and a 15-amp branch circuit. Use a 15-amp time delay type fuse or circuit breaker. To reduce the risk of shock or fire, if power cord is worn or cut, or damaged in any way, have it replaced immediately.

The A-C motor used on this tool is a non-reversible universal type, having the following specifications:

Voltage	120
Amperes	15
Hertz (Cycles)	60
Phase	Single
RPM	4000
Shaft Rotation	Clockwise
Brake	Automatic

General Electrical Connections

DANGER: To reduce the risk of electrocution:

1. **Use only identical replacement parts when servicing. Servicing should be performed by a qualified service technician.**
2. **Do not use in rain or where floor is wet.**

WARNING Do not permit fingers to touch the terminals of plug when installing or removing the plug to or from the outlet.

If power cord is cut, or damaged in any way, have it replaced immediately.

110-120 Volt, 60 Hz. Tool Information

Double Insulated

The miter saw is double insulated to provide a double layer of insulation between you and the tool's electrical system. All exposed metal parts are isolated from the internal metal motor components with protecting insulation.

Motor Specifications and Electrical Requirements (continued)

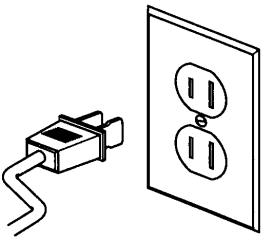
Polarized Plug

Your unit has a plug that looks like the one shown on next page.

To reduce the risk of electrical shock, this appliance has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way, if the plug does not fit fully in the outlet, reverse plug.

If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.

WARNING: Double insulation does not take the place of normal safety precautions when operating this tool.



Motor Safety Protection

1. Connect this tool to a 120v, 15-amp branch circuit with a 15-amp time delay fuse or circuit breaker. Using the wrong size fuse can damage the motor.
2. If the motor won't start, release the trigger switch immediately. **Unplug The Tool.** Check the saw blade to make sure it turns freely. If the blade is free, try to start the motor again. If the motor still does not start, refer to the "Motor Troubleshooting Chart."
3. If the motor suddenly stalls while cutting wood, release the trigger switch, unplug the tool, and free the blade from the wood. The motor may now be restarted and the cut finished.
4. Fuses may "blow" or circuit breakers may trip frequently if:
   a. **Motor Is Overloaded-**Overloading can occur if you cut too rapidly or make too many start/stops in a short time.
   b. Line voltages are more than 10% above or below the nameplate voltage. For heavy loads, however, the voltage at motor terminals must equal the voltage specified on nameplate.
   c. Improper or dull saw blades are used.
5. Most motor troubles may be traced to loose or incorrect connections, overload, low voltage (such as small size wire in the supply circuit) or to overly long supply circuit wire. Always check the connections, the load and the supply circuit whenever motor doesn't work well. Check wire sizes and length with the Wire Size Chart below.

Wire Sizes

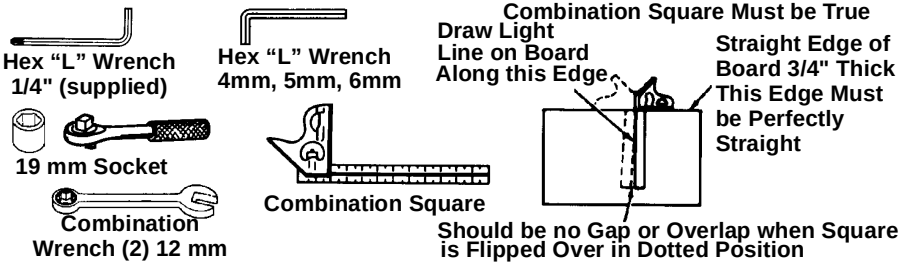
NOTE: Make sure the proper extension cord is used and is in good condition. The use of any extension cord will cause some loss of power. To keep this to a minimum and to prevent overheating and motor burn-out, use the table below to determine the minimum wire size (A.W.G.) extension cord.

For circuits that are farther than 100 feet away from electrical service box, the wire size must be increased proportionately in order to deliver ample voltage to the saw motor.

Extension Cord Length	Wire Sizes Required for 120V (A.W.G.)
0-25 Ft.	14
26-50 Ft.	12

Unpacking and Checking Contents

Tools Needed



Unpacking

WARNING: To reduce the risk of injury from unexpected starting or electrical shock, do not plug the power cord into a power source outlet during unpacking and assembly. This cord must remain unplugged whenever you are working on the saw.

This Miter Saw is shipped complete in one box.

WARNING: Although compact, this saw is heavy. To reduce the risk of back injury, get help whenever you have to lift the saw.

1. Before removing the miter saw from the carton tighten the slide lock knob to guard against sudden movement.
2. Remove the miter saw from the carton by lifting the saw with the carrying handle.
3. Place the saw on a secure, stationary work surface and look the saw over carefully.

WARNING: If any part is missing or damaged, do not plug the saw in until the missing or damaged part is correctly replaced. To avoid electric shock, use only identical replacement parts when servicing double insulated tools.

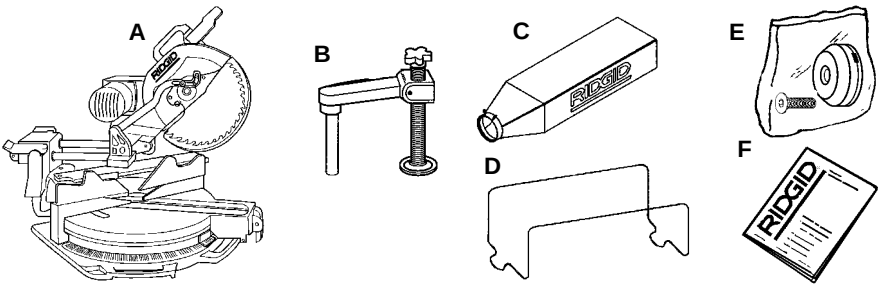
List of Loose Parts

NOTE: Before beginning assembly, check that all parts are included. If you are missing any part, do not assemble the saw. E-mail us at info@ridgidwoodworking.com if any parts are damaged or missing. Sometimes small parts can get lost in packaging material. Do not throw away any packaging until saw is put together. Check packaging for missing parts before contacting RIDGID. A complete parts list (Repair Parts) is at the end of the manual.

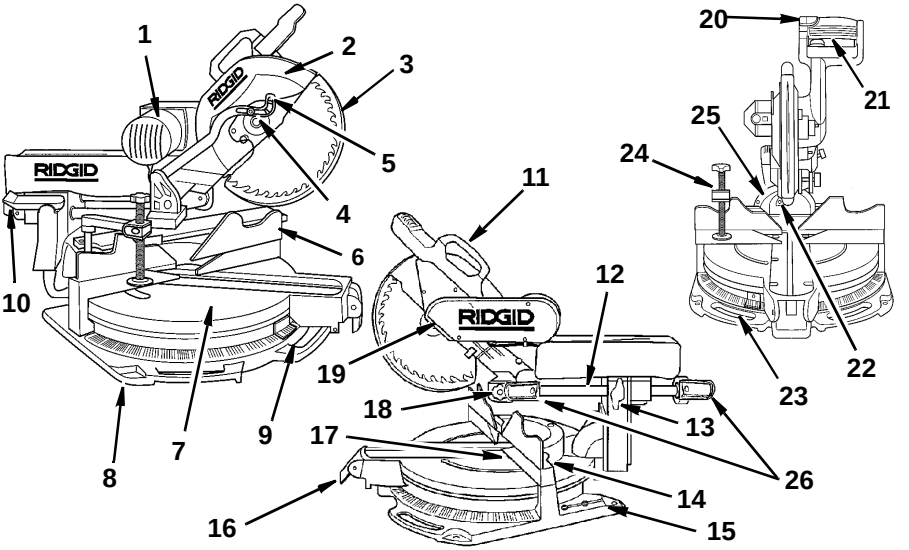
Use the list to identify the number of the missing part.

The following parts are included:

Part or Assembly	Qty.
A Basic Saw Assembly	1
B Workpiece Clamp	1
C Dust Bag	1
D Dust Bag Frame	1
E Laser System Bag Asm	1
F Operators Manual	1



Getting to Know Your Miter Saw



1. **Warning Label**
2. **Upper Blade Guard -** Supports the motor, handle, switch, blade and lower guard.
3. **Lower Blade Guard -** The blade guard helps protect your hands from the blade in the raised position. To reduce the risk of binding on the workpiece, it retracts as the blade is lowered.
4. **Cover Plate -** Holds the lower guard and is attached to upper guard. Prevents the arbor screw from backing out when properly attached with the cover plate stop screw.
5. **Cover Plate Stop Screw -** When this screw is loosened, the cover plate is rotated to the rear, allowing for blade removal/replacement.
6. **Sliding Fence(s) -** Fence(s) slide left/right to provide maximum support for the workpiece.
7. **Table -** Sits in base, supports pivot and allows for approximately 62° miter left and right.
8. **Base -** Supports table, holds accessories and allows for work bench or leg set mounting.
9. **Miter Indicator -** Indicates the angle (miter) the blade is set at.
10. **Bevel Lock Lever -** Locks the miter saw at a desired bevel angle.
11. **Top Carrying Handle -** Convenient way to transport saw.
12. **Slide Tube(s) -** Allow the blade to slide for cutting various workpiece widths.
13. **Slide Lock Knob -** Prevents the saw's sliding motion by locking the carriage in place.
14. **Slide Fence Lock Knob -** Locks fence at correct cutting position.
15. **Combination Wrench -** 1/4" Hex "L" wrench.
16. **Miter Lock Lever/Miter Index Thumbwheel -** The miter lock lever securely locks the saw at a desired miter angle. Index points have been provided at 0°, 15°, 22.5°, 31.6° (Crown molding), 45°, 60° Left and Right.
17. **The Repeat-A-Cut™ -** Surface allows pencil marks to be made and easily erased for duplicate cuts.
18. **Depth Adjustment Clamp and Head Hold Down -** Limits the saw's downward travel for use when cutting dadoes and locks the saw in the lowered position for compact storage.
19. **Arbor Lock Pin -** Allows the user to keep blade from rotating while tightening or loosening arbor during blade replacement or removal.

20. **Switch Interlock Button -** Prevents trigger switch from being accidentally engaged.
21. **On/Off Trigger Switch -** To prevent the trigger from being accidentally engaged, a lock-off button is provided. To start the tool, press in the switch interlock button and squeeze the trigger. Release the trigger to stop the miter saw. Install a padlock through the hole in the trigger to prevent unauthorized use.
22. **Bevel Index Pin -** This pin provides indexes at 0° and 22.5°, CM, and 45° left and right.
23. **Front Carry Handles -** Convenient way to transport the saw.
24. **Workpiece Clamp -** Helps to hold workpiece in position for precise cutting. Quick release allows easy movement for workpiece width adjustment. Pin of clamp fits in either hole in rear at fence.
25. **Bevel Indicator -** Indicates the angle (bevel) the blade is set.
26. **Cord Wrap Brackets**

Assembly

WARNING: For your own safety, never connect plug to power source outlet until all assembly steps are complete, and you have read and understood the safety and operational instructions.

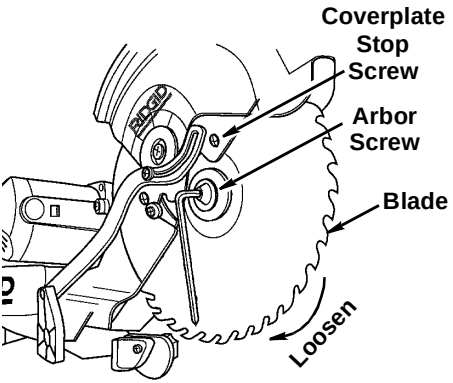
Installing or Removing the Blade

WARNING: To reduce the risk of injury from a thrown workpiece or thrown pieces of blade, do not use a blade larger or smaller than 12" diameter.

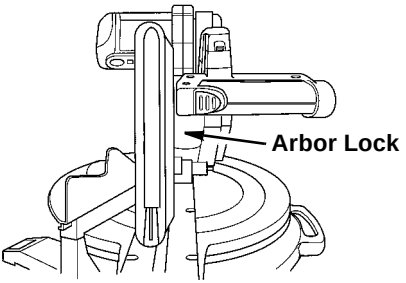
WARNING: To reduce the risk of injury from unexpected starting, unplug the saw whenever you are removing or installing the blade.

NOTE: See "Mounting the Laser System" section of the owners manual for directions on installing the laser system.

1. Unplug the saw from the outlet. Cutting head is up.
2. Rotate the lower blade guard by hand. Loosen, but do not remove, the cover plate stop screw using the Phillips end of combination wrench.
3. Lift the lower guard up and tilt the lower guard assembly back so the arbor screw is exposed.
4. Fit 1/4" hex end of combination tool in arbor screw or use 1/2" box end wrench.



5. Press the arbor lock and hold it in firmly while turning the wrench clockwise. The arbor lock will engage after some turning of the wrench.



NOTE: The arbor screw has a left hand thread. This helps prevent unwanted loosening of the arbor screw during normal operation.

6. Remove the arbor screw, arbor washer, outer blade collar, and the blade.

NOTE: Pay attention to pieces removed, noting their position and direction they face (see illustration). Wipe the blade collars clean of any sawdust before installing the new blades.

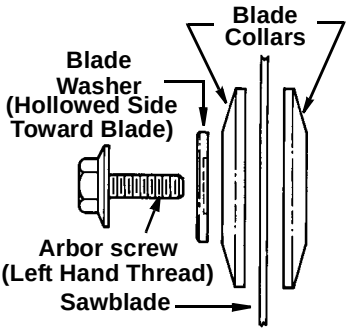
CAUTION: To reduce the risk of cuts from extremely sharp teeth: Wear gloves when installing or removing sawblade.

See cautions in "Using Carbide Tipped Blades" section concerning inspection, use, and selection of carbide tipped and other sawblades.

7. Install the new 12" blade (see recommended accessory list). Make sure the rotation arrow on the blade matches the clockwise rotation arrow on the upper guard. The blade teeth should always point downward at the front of the saw.
8. Install the outer blade collar, blade washer and arbor screw. Press the arbor lock and turn the combination wrench or the 1/2" wrench counter clockwise to secure the blade. Tighten arbor screw using moderate force, but do not overtighten.
9. Lower the lower blade guard until the slot in cover plate rests all the way down on the cover plate stop screw. Tighten the screw with the Phillips end of the combination wrench.

DANGER: Never use saw without guard cover plate securely in place. It keeps the arbor screw from falling out if it accidentally loosens, and prevents the spinning blade from coming off the machine.

10. Be sure the arbor lock is released so the blade turns freely.



NOTE: The arbor lock can be damaged by improper use. If the arbor lock will not hold, lower the blade down on to a scrap piece of wood positioned against the fence. This will serve as an alternate locking means.

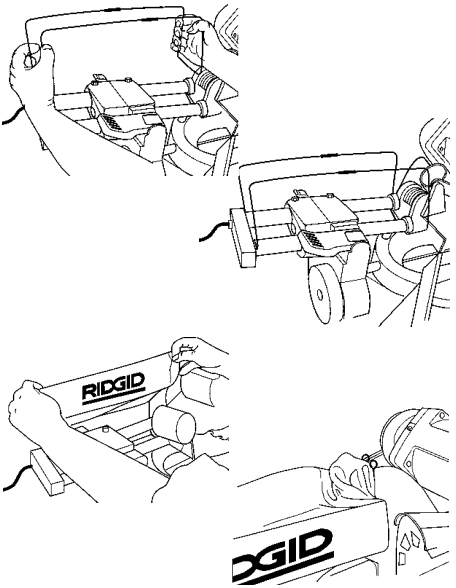
WARNING: Make sure the collars are clean and properly arranged. After installing a new blade, make sure the blade clears the table slot at the 0° and 45° bevel positions. Lower the blade into the table slot and check for any contact with the base or turn table structure. If blade contacts table, seek authorized service.

If blade contacts insert, refer to "Alignment"section for adjustment.

Assembling Dust Bag

1. Locate the dust bag frame and cloth dust bag.
2. Clip the dust bag frame in place on the slide tubes as shown.
3. Slide the cloth dust bag over the dust bag frame.
4. Connect the dust elbow to the dust port on the upper blade guard.
5. Clamp dust bag onto elbow.

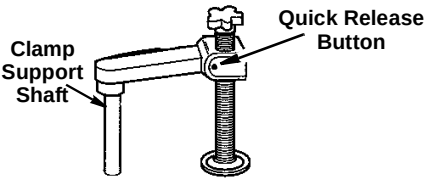
NOTE: If connecting a 2-1/2" wet/dry vac hose to the saw, do not attach the dust bag frame, dust bag and elbow to the saw. Connect the wet/dry vac hose directly to the dust port on the upper blade guard.



Workpiece Clamp Installation

The workpiece clamp is used to help hold the workpiece in the correct cutting position. It may be used on either the left side of the miter saw or the right side. Before turning the saw on make sure the workpiece clamp does not interfere with the cutting action of the saw.

1. Align pin in clamp shaft with keyway in fence. Insert clamp shaft and rotate.



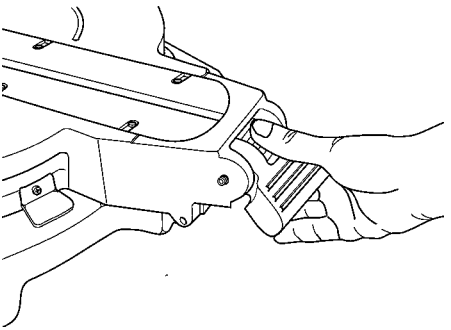
Four Basic Saw Controls

In order to properly adjust and align the Sliding Compound Miter Saw there are four basic controls that must be understood.

1. Miter lock lever and miter index wheel

   To change the miter setting of the blade:

   a. Raise the miter lock lever.
   b. Rotate the miter index wheel partially downward to disengage the current index and engage the next index.
   c. Rotate the miter index wheel completely downward to bypass all miter indexes.
   d. Turn the table to the desired miter setting and lock the miter lock lever.



Four Basic Saw Controls (continued)

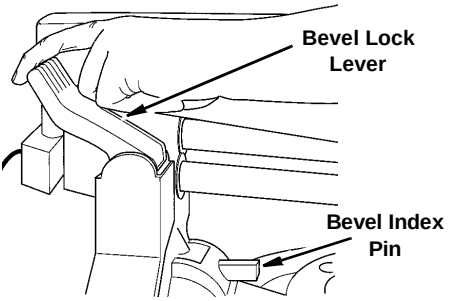
2. Bevel lock lever/index pin

   To change the bevel setting of the blade:

   a. Pull the bevel lock lever forward. Then rotate the bevel index pin downward. This will allow the blade to be tilted and at the same time "by-pass" the preset bevel indexes.

   b. To engage the preset bevel indexes, rotate the bevel lock index pin up.

   c. Engage bevel index pin and/or bevel lock lever before cutting.



3. Depth Adjustment Cam and Head Hold Down

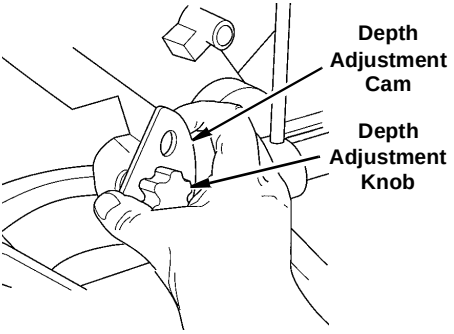
   To release the blade -

   a. While applying light downward pressure on the handle, pull the depth adjustment cam to the right, then raise the blade.

      NOTE: It is not necessary to loosen depth adjustment knob.

   b. Rotate the depth adjustment cam so the flat on the cam is facing upward.

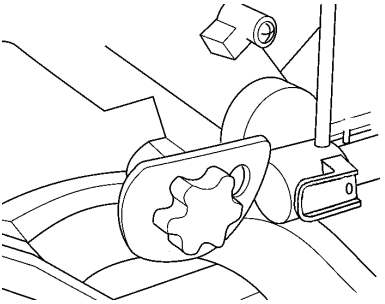
      NOTE: Head Hold Down is for transport and storage purposes only. No cutting operations should take place while hold down is engaged.



   To lock the blade in the lower position.

   a. Pull the depth adjustment cam to the right and lower the blade into the table.

   b. Rotate the depth adjustment cam until slot engages pin on upper guard.



4. Slide lock knob

   Turn the slide lock knob counterclockwise to loosen and clockwise to tighten. Loosening the knob will allow the powerhead to slide back and forth. Tightening the knob will lock the powerhead in place.

Alignment (Adjustments)

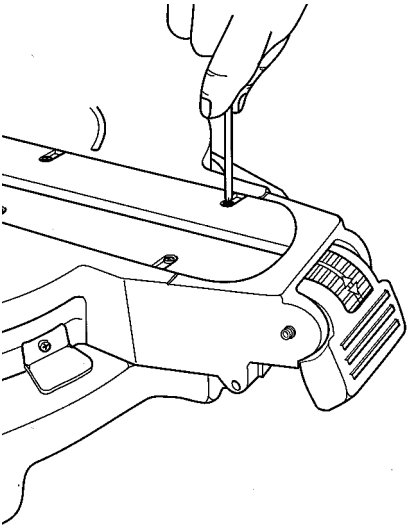
WARNING: To reduce the risk of injury from unexpected starting or electrical shock, do not plug the saw in. The power cord must remain unplugged whenever you are working on the saw.

NOTE: For best results, the saw must be properaly aligned before mounting and using the laser system.

Step One: Repositioning Zero Clearance Blade Insert

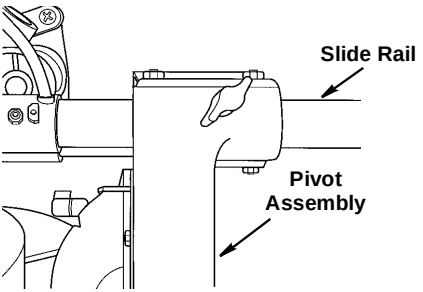
The zero clearance blade insert needs to be repositioned so it is temporarily out of the way when aligning the blade. It may be replaced after the blade is aligned.

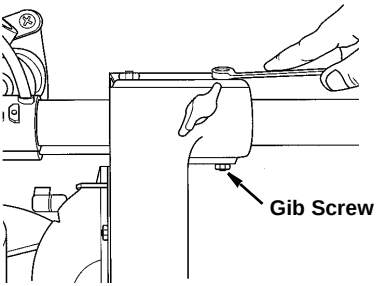
1. Loosen the three screws that secure the zero clearance blade insert on one side of the blade.
2. Slide the zero clearance insert away from the blade as far as possible.
3. Retighten the three screws.
4. Repeat steps 1-3 for the opposite side of the blade.



Step Two: Slide Tube Adjustment

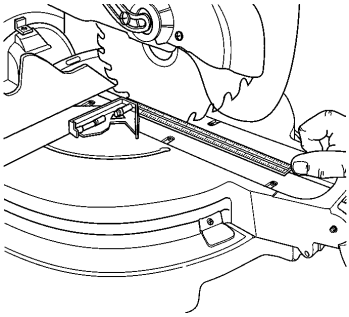
1. Place the powerhead in the 0° miter/0° bevel index and lock head in lower position.
2. Check to see that the blade is approximately centered between the two zero clearance blade inserts. Also check for play between the right slide rail and the pivot assembly.
3. If adjustment is required loosen the jam nuts on all four gib screws as shown.
4. Loosen the **top** two gib screws.
5. Tighten or loosen the lower two gib screws as required to center the blade between the zero clearance inserts.
6. Tighten the **lower** two jam nuts.
7. To minimize play in the slide tubes gradually tighten the **top** two gib screws while at the same time sliding the powerhead back and forth. Tighten the **top** jam nuts.

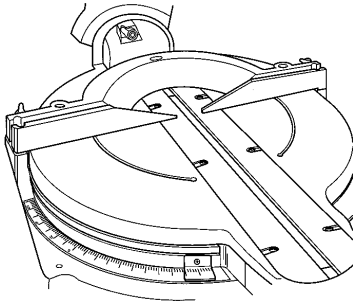




Step Three: Blade Square to Fence (Miter Alignment)

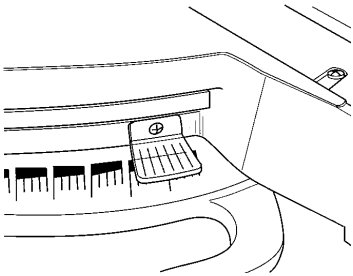
1. Place the blade in the 0° miter index and lock the miter lock.
2. To check blade squareness to fence, lock powerhead in lower position. Use a combination square. Place the square against the fence and next to the blade as illustrated. Locate the square properly so it does not contact the set in the teeth of sawblade, giving an inaccurate reading. The sawblade body should contact the full length of the square.
3. If blade contacts full length of square, no alignment is necessary, skip a-c below. If blade is not square to the fence, follow the alignment procedure.
   a. Remove sliding fences by loosening fence lock knobs approximately two turns. Slide fences toward blade and lift up to remove.
   b. Loosen the three (3) fence lock bolts.
   c. Place a combination square against the sawblade and adjust the fence until it is 90° to the blade.
   d. Tighten the three (3) fence lock bolts.
   e. Replace sliding fences and tighten fence lock knobs.





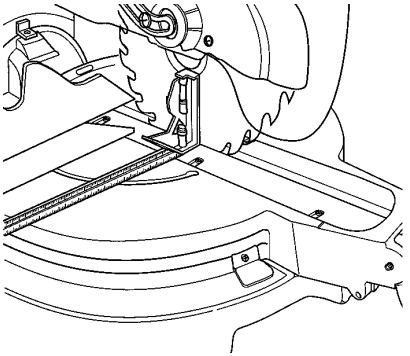
Adjust Miter Scale Indicator

1. Loosen the Phillips screw that holds the indicator in place.
2. Reposition the indicator to align it with 0° mark, and retighten screw.



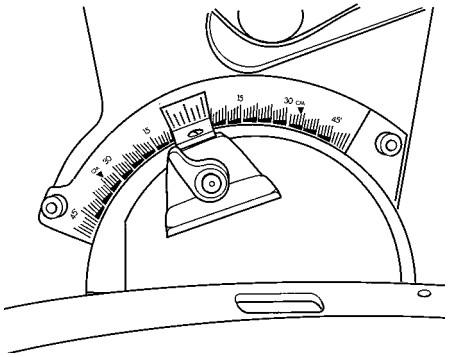
Step Four: Blade Square to Table (Bevel Adjustment)

1. Place the saw in the 0° bevel index position and make sure bevel lock is disengaged.
2. Lower the blade and engage the head hold down.
3. Use a combination square to check that the blade is 90° to the table. If the blade does not contact the full length of the square:
   a. Lift the bevel lock lever.
   b. Loosen the two socket head screws that secure the bevel scale.
   c. Grasp the upper metal guard and move the powerhead left or right until the blade makes full contact with the length of the square.
   d. Securely tighten two socket head screws.



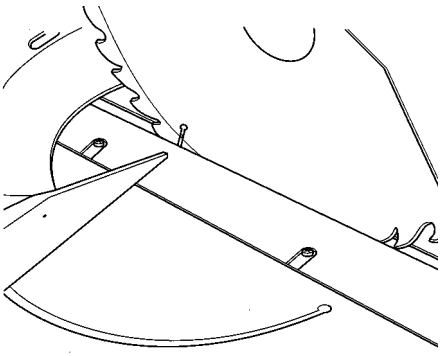
Adjust Bevel Scale Indicator

1. Loosen the Phillips screw that holes the indicator in place.
2. Reposition the indicator to align it with 0° mark and retighten screw.



Step Five: Positioning Zero Clearance Blade Insert (When Minimal Tear Out or Control of Small Offal is Desired)

1. Loosen the three screws that secure the zero clearance blade insert on one side of the blade.
2. Slide the zero clearance blade insert in towards the blade until it is as close to the blade as possible without actually touching the blade.
3. Retighten the three screws.
4. Repeat steps 1-3 for the opposite side of the blade.



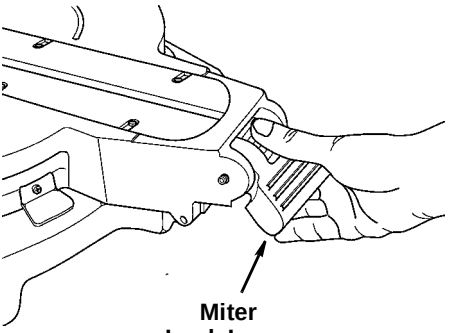
Miter Lock Lever Adjustment

With the blade set at an “unindexed” miter position (other than 0°, 15°, 22.5°, 31.6°, 45° and 60°) and the miter lock lever set in the “locked” position the locking action should feet tight and secure.

Considerable effort should be required to move the table (blade). While it is always possible to force the table to move, it should resist moving when a reasonable amount of force is applied.

To check, follow these steps:

1. Release miter lock lever and position blade at an “unindexed” position. Lock the miter lock lever.
2. Try and rotate the table/blade. If the table easily moves:
   a. Release the miter lock lever. Locate the set screw underneath the miter lock lever.
   b. Use a 4mm hex wrench to adjust the set screw.
   c. Lock the miter lock lever and try moving the table. Readjust if necessary.



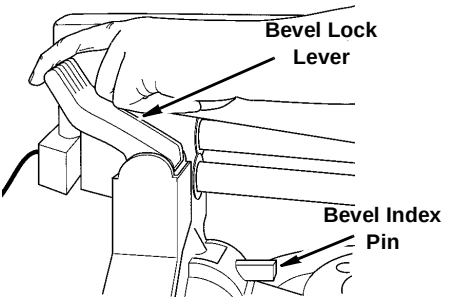
Bevel Lock Lever Adjustment

With the blade set at an “unindexed” bevel position (other than 0°, 22.5°, 33-7/8°, 45°) and the bevel lock lever set in the “locked” position the locking action should feel tight and secure.

Considerable effort should be required to move the blade. While it is always possible to force the blade to move, it should resist moving when a reasonable amount of force is applied.

To check, follow these steps:

1. Release the bevel lock lever and position the blade at an “unindexed” position. Lock the bevel lock lever.
2. Try and bevel the blade. If the blade moves easily:
   a. Release the bevel lock lever.
   b. Locate the two 12mm locking jam nuts behind the bevel lock lever.
   c. Loosen the top locking jam nut.
   d. To tighten the bevel lock lever mechanism turn the bottom jam nut clockwise. To loosen the lock lever mechanism turn the bottom jam nut counterclockwise.
   e. Lock the bevel lock lever and try moving the blade. Readjust if necessary.
   NOTE: When unlocked the bevel mechanism should freely pivot. A grating sound indicates the bevel mechanism needs to be loosened slightly.



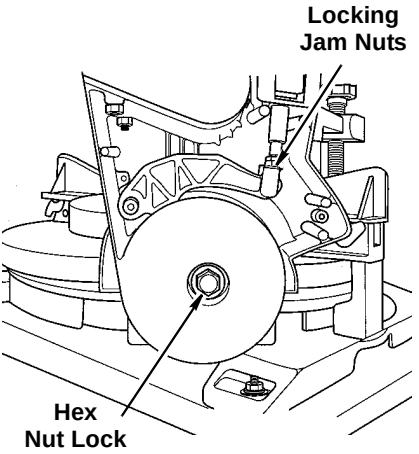
Bevel Pivot Movement/Adjustment

Check that the miter saw bevels easily by unlocking the bevel lock lever and tilting the blade. **NOTE:** At least one thread of the pivot bolt should stick out past the hex lock nut.

If the movement is tight or there is looseness in the pivot, do the following adjustment procedure:

a. Unlock the bevel lock lever.
b. Turn the hex lock nut with 3/4" or 19mm socket.

Recheck the bevel movement and readjust if necessary.



Mounting The Miter Saw

WARNING: To reduce the risk of injury from unexpected saw movement:

a. Before moving the saw, unplug electric cord. Lock the miter and bevel knobs and lock the power head in the lower position.

b. To reduce the risk of back injury, hold the tool close to your body when lifting. Bend your knees so you can lift with your legs, not your back. Lift by using the hand-hold areas at each side of the bottom of the base, by the carrying handle, or the handles on the front of base.

c. Never carry the miter saw by the power cord or the trigger grip of the plastic handle. Carrying the tool by the power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.

d. Place the saw so other people cannot stand behind it. Thrown debris could injure people in its path.

e. Place the saw on a firm, level surface where there is plenty of room for handling and properly supporting the workpiece.

f. Support the saw so the table is level and the saw does not rock.

g. Bolt or clamp the saw to its support.

Place the saw in the desired location either on a work bench or other recommended leg set. The base of the saw has eight holes to mount the miter saw. Four smaller holes for screws are labeled A. Four holes for bolts are labeled B (see illustration). If the saw is to be used in one location, permanently fasten it to the work bench or leg set.

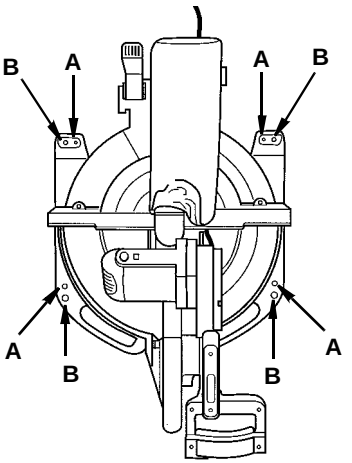
NOTE: When mounted on a large flat surface, the miter saw table is 4-1/2" high. Three stacked 2 x 4's can be used as a work support extension.

Portable Applications

To mount the saw to a 3/4" piece of plywood, use 4, 1/4" bolt holes **or** the 4 screw holes. The mounting board can then be clamped down to prevent it from tipping. Plywood mount also helps protect saw from damage during the rough handling associated with portable miter saw usage.

Work Bench Applications

Mount as specified in portable applications. Check for workpiece clearances to left and right of saw.



Safety Instructions for Basic Saw Operations

Before Each Use
Inspect your saw.

Disconnect The Miter Saw. To reduce the risk of injury from accidental starting, unplug the saw, before changing the setup, changing the blade or adjusting anything.

Compare the direction of rotation arrow on the guard to the direction arrow on the blade. The blade teeth should always point downward at the front of the saw.

Tighten the arbor screw.

Tighten the cover plate stop screw.

Check Damaged Parts. Check for:

- Proper alignment of moving parts,
- Damaged electric cords,
- Binding of moving parts,
- Broken parts,
- Stable mounting
- Function of arm return spring and lower guard: Push the arm all the way down, then let it rise up until it stops by itself. Check the lower guard to see if it closed fully. If it did not, follow the instructions in the "Troubleshooting" section.
- Smooth, solid movement of sliding assembly.
- Other conditions that may affect the way the miter saw works.

If any part of this miter saw if missing, bent, or broken in any way, or any electrical parts don't work, turn the saw off and unplug it. **Replace** damaged, missing, or failed parts before using the saw again.

Keep Guards In Place, in working order, and in proper adjustment.

Maintain Tools With Care. Keep the miter saw clean for best and safest performance. Follow instructions for lubricating. **DON'T** put lubricants on the blade while it's spinning.

Remove Adjusting Keys And Wrenches from tool before turning it on.

To Reduce the Risk of Injury From Jams, Slips Or Thrown Pieces

- Use Only Recommended Accessories. (See "Accessory" section within.) Consult this Owner's manual for recommended accessories. Follow the instructions that come with the accessories. The use of improper accessories may cause risk of injury to persons.
- Choose the right 12-inch diameter blade for the saw and material you plan to cut.
- Make sure the blade is sharp, undamaged and properly aligned. With the saw unplugged, push the power head all the way down. Hand spin the blade and check for clearance. Tilt the power-head to 45 degree bevel and repeat the check. If the blade hits anything, make the adjustments shown in the Maintaining "Alignment (Adjustments)" section.
- Make sure the blade, arbor collars and laser system are clean.
- Make sure the arbor collars' and laser discs' recessed sides are facing the blade.
- Using 1/4" hex end of combination wrench (supplied) or 1/2-inch box end wrench, make sure the left hand thread arbor screw is firmly tightened counterclockwise.
- Make sure all clamps and locks are tight and there is no excessive play in any parts.

- **Keep work area clean**. Cluttered areas and benches invite accidents. Floor must not be slippery.

To reduce the risk of burns or other fire damage, never use the miter saw near flammable liquids, vapors or gases.

Plan Ahead To Protect Your Eyes, Hands, Face and Ears

Know your miter saw. Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

To reduce the risk of injury from accidental contact with moving parts, don't do layout, assembly, or setup work on the miter saw while any parts are moving.

Reduce the Risk of Accidental Starting. Make sure switch is "OFF" before plugging miter saw into a power outlet.

Plan your work.

Use The Right Tool. Don't force tool or attachment to do a job it was not designed to do. Use a different tool for any workpiece that can't be held in a solidly braced, fixed position.

CAUTION: Because of the sliding action of this saw, this machine is not designed for cutting metals. Use this miter saw to cut only wood, and wood like products. Other materials may shatter, bind on the blade, start fires or create other dangers.

Dress For Safety

The operation of any power miter saw can throw foreign objects into the eyes. This can result in permanent eye damage. Wear safety goggles (not glasses) that comply with ANSI Z87.1 (or in Canada CSA Z94.3-99) shown on package. Everyday eyeglasses have only impact resistant lenses. They are not safety glasses. Safety goggles are available at many local retail stores. Glasses or goggles not in compliance with ANSI or CSA could seriously hurt you when they break.

- Do not wear loose clothing, gloves, neckties or jewelry (rings, wrist watches) They can get caught and draw you into moving parts.
- Wear nonslip footwear.
- Tie back long hair.
- Roll long sleeves above the elbow.
- Noise levels vary widely. To reduce the risk of possible hearing damage, wear ear plugs or muffs when using miter saw for hours at a time.
- For dusty operations, wear a dust mask along with safety goggles.

Preparing to Make the Cut

Inspect Your Workpiece. Make sure there are no nails or foreign objects in the part of the workpiece to be cut.

Plan your work to avoid thrown pieces caused when the workpiece binds on the blade and is torn from your hands.

Plan how you will make the cut. Always:

- Make sure the blade is not spinning.
- Raise the blade.
- Slide the saw out above the front edge of the workpiece before starting saw, and
- Push the sawblade down on top of the wood and back toward the rear of the saw to make the cut.

DANGER: NEVER pull the saw toward you during a cut. The blade can suddenly climb up on top of the workpiece and force itself toward you.

Plan the way you will hold the workpiece from start to finish.

- Avoid awkward operations and hand positions where a sudden slip could cause fingers or hand to move into the blade.
- Don't Overreach. Keep good footing and balance.
- Keep your face and body to one side of sawblade, out of line with a possible throwback.
- Cut only one workpiece at a time.

Never cut **Freehand:**

- Brace your workpiece solidly against the fence and table top so it will not rock or twist during the cut.
- Make sure there's no debris between the workpiece and its supports.
- Make sure no gaps between the workpiece, fence and table will let the workpiece shift after it is cut in two.
- Cut only one workpiece at a time.
- Keep the cut off piece free to move sideways after it's cut off. Otherwise, it could get wedged against the blade and could be thrown violently.
- Clear everything except the workpiece and related support devises off the table before turning the miter saw on.
- **Secure Work.** Use clamps or a vise to help hold the work when it's practical.

Use extra caution with large, very small or awkward workpieces:

- Use extra supports (tables, saw horses, blocks, etc.) for any workpieces large enough to tip when not held down to the table top.
- **Never** use another person as a substitute for a table extension, or as additional support for a workpiece that is longer or wider than the basic miter saw table or to help feed, support or pull the workpiece.
- Do not use this saw to cut pieces too small to let you easily hold the work while you keep the thumb side of your index (pointer) finger against the outside edge of the fence.
- When cutting irregularly shaped workpieces, plan your work so it will not slip and pinch the blade and be torn from your hands. A piece of molding, for example, must lie flat or be held by a fixture or jig that will not let it twist, rock or slip while being cut.

- Properly support round material such as dowel rods. They have a tendency to roll while being cut, causing the blade to "bite." To avoid this, always use a fixture designed to properly hold your workpiece.

Whenever Saw Is Running

WARNING: Don't allow familiarity (gained from frequent use of your miter saw) cause a careless mistake. A careless fraction of a second is enough to cause a severe injury.

Before starting your cut, observe the miter saw while it runs. If it makes an unfamiliar noise or vibrates excessively, stop immediately. Turn the saw off. Unplug the saw. Do not restart until finding and correcting the problem.

Keep Children Away. Keep all visitors a safe distance from the miter saw. Make sure bystanders are clear of the miter saw and workpiece.

Never confine the piece being cut off. Never hold it, clamp it, touch it, or use length stops against it while the blade is spinning. It must be free to move sideways on its own. If confined, it could get wedged against the blade and thrown violently.

Let the blade reach full speed before cutting. This will help reduce the risk of a thrown workpiece.

Don't Force Tool. It will do the job better and safer at its designed rate. Feed the saw into the workpiece only fast enough to let the blade cut without bogging down or binding.

Before freeing jammed material:

- Turn miter saw "OFF" by releasing trigger switch.
- Wait for all moving parts to stop.
- Unplug the miter saw.

After finishing a cut:

- Keep holding the power head down.
- Release the switch, and wait for all moving parts to stop before moving your hands or raising power head.
- If blade doesn't stop within 6 seconds, unplug the saw and follow the instructions in the Trouble Shooting section for fixing the blade brake before using the saw again.

Before Leaving The Saw:

Never Leave Tool Running Unattended. Turn power off. Wait for all moving parts to stop.

Make workshop child-proof. Install a padlock through the hole provided in the trigger to prevent unauthorized usage. Lock the shop. Disconnect master switches. Store tool away from children and others not qualified to use the tool.

Basic Saw Operations

Making Common Slide Compound Cuts

There are two types of cuts that can be made with the slide compound miter saw;

1. Slide Cutting
   a. The slide lock knob is left loose, the cutting head is pulled towards the operator, the sawblade is lowered into the workpiece and then pushed to the rear of the saw to complete the cut.
   b. Used for cutting wide pieces.
2. Chop Cutting
   a. The slide lock knob is tightened and the saw handle is pushed down to cut through the workpiece.
   b. This type of cut is used mainly for narrow pieces.

WARNING: For your convenient use, your saw has a blade brake. The brake is not a safety device. Never rely on it to replace proper use of the guard on your saw. If the blade does not stop within 6 seconds, unplug the saw and follow the instructions in the Trouble Shooting section for fixing the brake before using saw again.

WARNING: Do not try to cut short pieces. You cannot properly support the workpiece and keep your hold down hand the required distance from the blade.

Slide Cutting

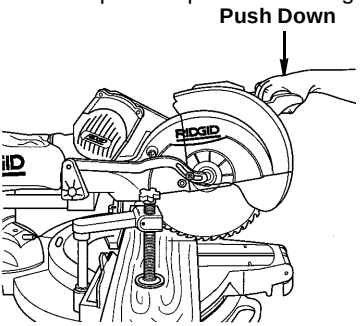
Plan your work to avoid the spinning blade and keep the workpiece from binding on the blade and flying out of your hands.

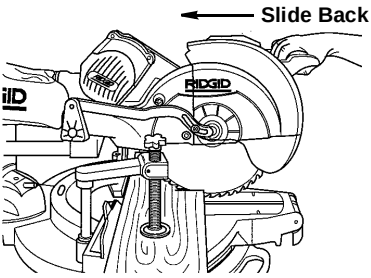
DANGER: Never pull the saw toward you during a cut. The blade can suddenly climb up on top of the workpiece and force itself toward you.

DANGER: Never lower the saw completely in front of the workpiece and then cut only on the forward push. The upward moving rear portion of the blade could twist the workpiece from your grasp.

Workpieces up to 13-1/2" wide and 3-1/2" thick can be cut following the directions below:

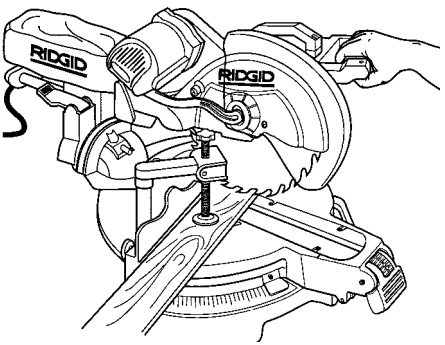
1. Put wood against fence and secure with clamp as appropriate.
2. Loosen the slide lock knob.
3. Grasp the saw handle and pull the carriage until the arbor (center of sawblade) is over the front edge of the workpiece.
4. Switch on the saw and allow to come to full speed.
5. Push the saw handle all the way down and cut through the leading edge of the workpiece.
6. Gently push the saw handle towards the fence completing the cut.
7. Push power head to full rear position after each cut.
8. Turn motor off and allow blade to come to a complete stop before moving hands.





Chop Cutting

1. Slide the cutting head to the rear as far as it will go.
2. Lock slide lock knob.
3. Position workpiece on table and against fence and secure with clamp as appropriate.
4. Turn on saw and lower blade into workpiece.
5. After cut is complete turn off saw, allow blade to stop rotating before allowing cutting head to rise up.



Body and Hand Position

- Never place hands near cutting area. Place hand at least 4" from path of blade.
- Hold workpiece firmly to the fence to prevent movement toward the blade.
- When holding the workpiece to the left side of the blade, always use your left hand. Use your right hand to hold the workpiece to the right side of the blade.
- Before making a cut, make a “dry run” with the power off so you can see the path of the blade.
- Keep hands in position until trigger has been released and the blade has completely stopped.

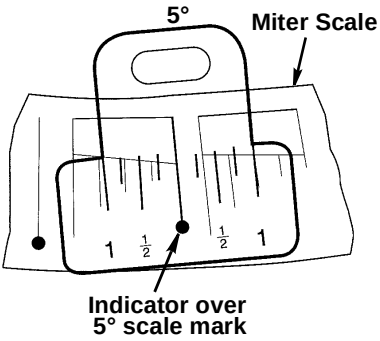
WARNING: Do not try to cut short pieces, you cannot properly support the workpiece <u>and</u> keep your hold down hand the required distance from the blade.

Miter Cut

When a miter cut is required, move the saw to the desired angle. Move with the handle to the miter angle to make the cut.

There are settings on the miter scale for angles (degrees) and crown molding.

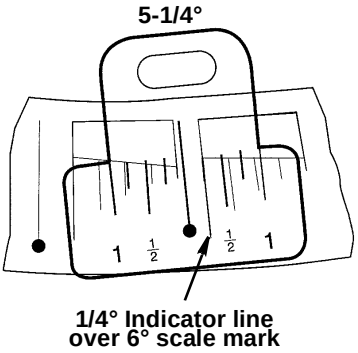
NOTE: Remember to unlock the miter lock lever before changing the miter angle.

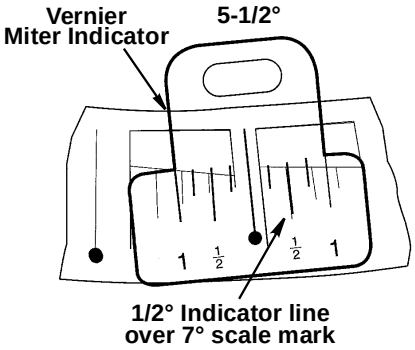


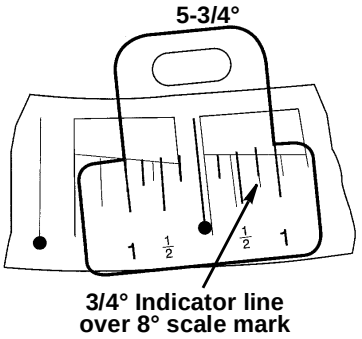
Miter Scale Usage

Vernier Miter Scale Operation:

The Vernier miter scale can quickly and accurately help the user to adjust the saw to any 1/4° increment as illustrated below.







Bevel Cut

When a bevel cut is required tilt the blade to desired bevel angle. Stand to the left side of the handle to make the cut.

Sliding Fence

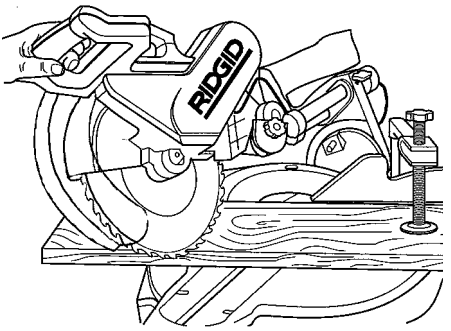
When beveling the blade to the left or right fence may have to be repositioned. Loosen the fence locking knob and slide the fence to the left or right as needed. Adjust the fence as close to the guard and link as possible to provide maximum support for the workpiece. Securely tighten knob and make a dry run with the saw off to check for clearance between the fence and guard. On certain extreme compound cuts it may be necessary to remove a sliding fence to avoid interference. After completing bevel cut(s) remember to replace and/or slide the fence back.

Vernier Bevel Scale Operation:

The Vernier bevel scale can quickly and accurately help the user to adjust the saw to any 1/2° increment as illustrated.

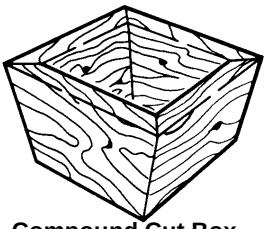
Compound Cut

When a compound cut is required, select the desired bevel and miter positions.



Cutting Compound Miters on Picture Frames and Boxes

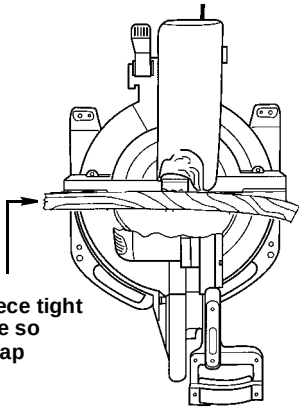
A compound miter is a cut requiring both a miter setting and bevel setting. A compound miter is used for making frames or boxes that have sloping sides and are wide at one end and narrow at the opposite end. Compound miters are “tricky” to make because the miter setting and bevel setting are directly related to each other. Every time the miter setting is changed the bevel setting must also be adjusted; likewise every adjustment to bevel requires a corresponding adjustment to miter. Because it may take several tries to obtain the desired angle, it is advisable to make test cuts on a scrap piece of material.



Compound Cut Box

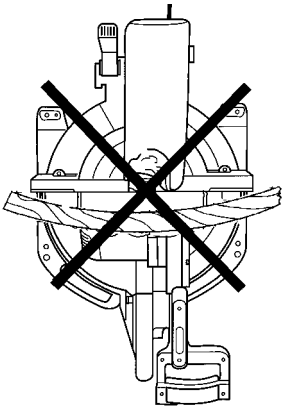
Cutting Bowed Material

Before cutting a workpiece, check to make sure it is not bowed. If it is bowed the workpiece must be positioned and cut as illustrated. Do not position workpiece incorrectly or try to cut the workpiece without the support of the fence. This will cause pinching of the workpiece on the blade. The workpiece could suddenly jump or move and your hand could hit the blade.



Hold workpiece tight against fence so there is no gap

Correct



Incorrect

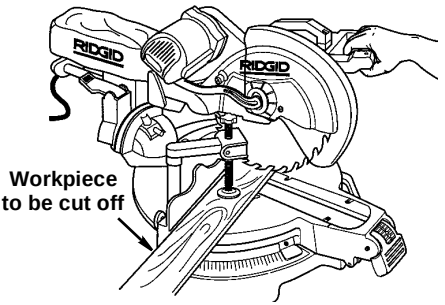
Workpiece Clamp Usage

WARNING: Avoid thrown workpieces. Avoid binding the work against the blade:

- **Always hold or clamp your work down to the saw.**
- **Do not hold or clamp the workpiece on both sides of the blade. The blade can throw a cut off piece if you confine the workpiece on both sides of the blade.**
- **Read and follow the instructions in the remainder of your saw's owners manual.**
- **This accessory was designed to make your miter saw operations more convenient. Read and understand these instructions completely before use.**
- **Always perform dry runs. Make sure the saw is unplugged. Completely set up your saw. Pull the blade and power head through the full range of motion to check for interference. The clamp can be used in a left or right configuration. Make sure that your blade, saw guard or motor does not interfere with the clamp. Correct any interference before use.**
- **Always tighten the clamp so that the workpiece is secured between the clamp and fence, support or base. No visible gap should be present between saw and wood.**

NOTE: The clamp can be used only in a vertical position.

1. Place material to be cut on table of miter saw. Secure workpiece to the fence and table by turning knob to tighten clamp. Do not overtighten the clamp. It should just lightly hold the wood against the fence and table.
2. Perform a dry run with the saw unplugged. After you believe that the saw is completely set up, pull the power head down as if you were making an actual cut. Check for interferences and for potentially dangerous situations. Adjust the set up so that a safe operation can be completed.
3. Complete the cut as instructed in the remainder of you miter saw owners manual.

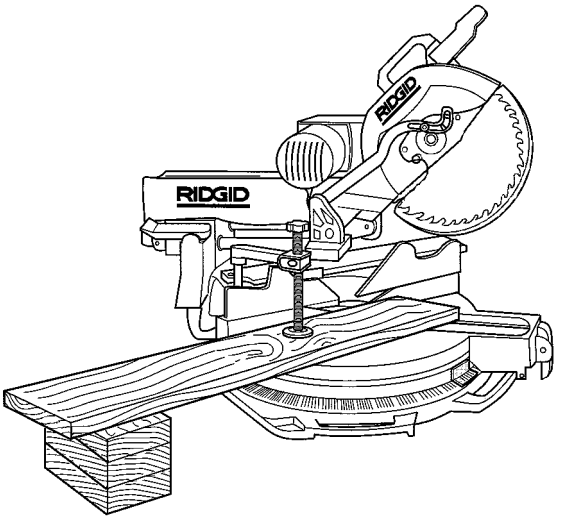


IMPORTANT: To help perform the safest and most precise miter saw cut, make the cut and then release the power switch. Hold the power head down and keep your hands in place until the blade stops rotating. Then raise the power head and remove workpiece from work table.

Workpiece Support

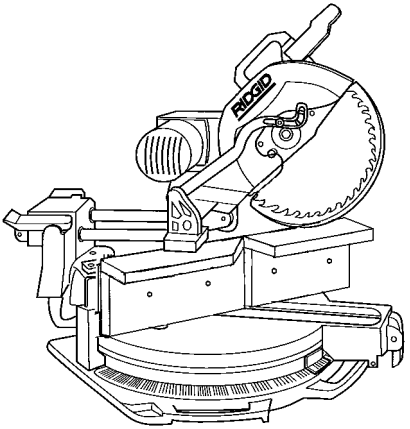
Long pieces need extra supports. The supports should be placed along the workpiece so the workpiece does not sag and your hand holding the workpiece is positioned 4" or more from the blade path. The support should let the workpiece lay flat on the base and work table during the cutting operation.

NOTE: When mounted on a large flat surface, the miter saw table is 4-1/2" high. Three stacked 2 x 4's can be used as a work support extension.



Auxiliary Fence

Certain unusual cuts may benefit from a fence face extension due to the size and position of the workpiece. Holes are provided in the fence to attach an auxiliary fence. Get a straight piece of wood typically 1/2 inch thick by 4-1/4 inches high by 23 inches long. To attach auxiliary fence, place the piece of wood on the miter saw fence. Mark the hole locations from the backside of the miter saw fence. Drill .200"-.250" holes, then countersink the holes on front of wood to receive #10 flat head screws. Attach the auxiliary fence securely and make a full depth cut. This will create the blade slot. Check for interference between the auxiliary fence and lower blade guard. Correct any interference before proceeding. The auxiliary fence is used with the saw in the 0° bevel position. If a bevel cut is desired, the auxiliary fence will have to be removed.



Rough Cutting A Dado

By using the depth adjustment cam it is possible to rough cut a dado as shown. On the outside of the depth adjustment cam are a series of marks. Use these marks as a reference to help set the blade to the correct cutting depth.

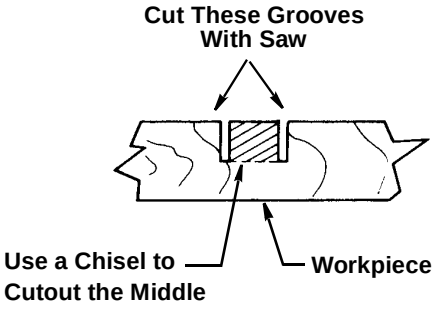
After the two outside cuts have been completed the **inside material** (represented by slanted lines) is removed with a chisel.

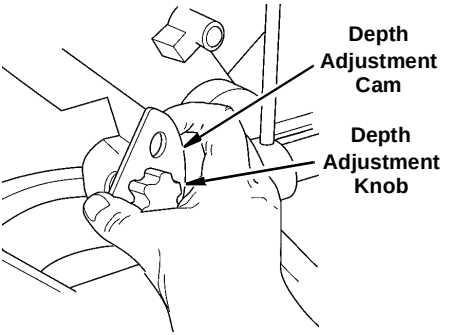
To set the depth stop:

1. Position depth adjustment cam so it engages locking collar.
2. Loosen lock knob.
3. Position depth stop cam so the powerhead stops at the desired depth.
4. Cut the two outside grooves.
5. Use a wood chisel to remove the material between the outside grooves.
6. To override depth setting pull depth stop cam outward and rotate so flat is up.

NOTE: It is not necessary to loosen depth adjustment knob.

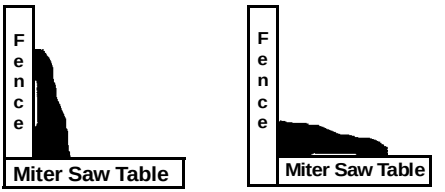
NOTE: Because of the sawblades cutting arc material at the beginning or end of the cut(s) may have to be removed with a chisel.





Cutting Base Moldings

Base moldings and many other moldings can be cut on a miter saw. The set up of the saw depends on your molding and your application as shown. Always make sure moldings rest firmly against fence and table.



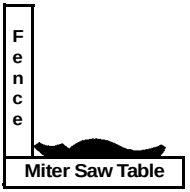
Cutting Base Molding

(Miter at 45° Bevel at 0°)

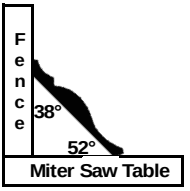
(Miter at 0°, Bevel at 45°)

Cutting Crown Moldings

Your compound miter saw does an excellent job of cutting crown molding. However, in order to fit properly, crown molding must be cut with extreme accuracy.



1.Workpiece Lying Flat See Chart for Bevel and Miter Settings



2.Workpiece Standing Up-Side Down (Saw at 0° Bevel/ 45°Miter)

Two Methods of Cutting Crown Molding

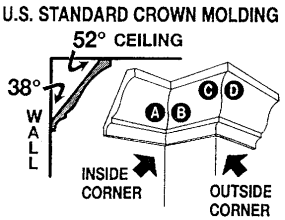
Crown molding may either be cut (1) flat on the miter saw table or (2) angled to the table and fence. (See square below) Most standard (U.S.) crown molding has a top rear angle (angle that fits next to the ceiling) of 52° and a bottom rear angle (angle that fits against wall) of 38°. Your miter saw has special miter settings at 31.6° left and right and a bevel setting at 33.9° to use when cutting crown molding flat on the miter saw table. These settings are identified with a “CM” mark.

Remember: Even though all of these angles are standard, rooms are very rarely constructed so the corners are exactly 90°. You will need to “fine tune” these settings and make necessary adjustments to the cutting angles.

Cutting Crown Molding Flat on the Miter Saw Table

The advantage of cutting crown molding flat on the table is that it is easier to secure the molding at the correct cutting position. Also larger pieces of crown molding may be cut laying flat on the miter saw table.

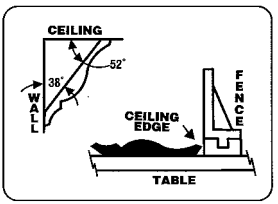
1. Set the bevel and miter angles using the chart below. Tighten the miter lock knob and the bevel lock knob.
2. Once again using the chart below correctly positions the molding.
3. Lower the head assembly, activate the switch and make the cut. Wait until the blade comes to a complete stop before allowing the head assembly to return to the “UP” position and/or removing the workpiece.
4. ALWAYS PRETEST COMPOUND SETTINGS ON SCRAP MATERIAL TO CONFIRM CORRECT ANGLES.



STANDARD CROWN MOLDING CUT LYING FLAT

THIS MACHINE HAS PRECISION STOPS FOR BOTH MITER AND BEVEL

	CORNER TYPE	SIDE OF CORNER	MITER SETTING	BEVEL SETTING
A →	INSIDE	LEFT	31-5/8° RIGHT	33-7/8° LEFT
B →	INSIDE	RIGHT	31-5/8° LEFT	33-7/8° RIGHT
C →	OUTSIDE	LEFT	31-5/8° LEFT	33-7/8° RIGHT
D →	OUTSIDE	RIGHT	31-5/8° RIGHT	33-7/8° LEFT



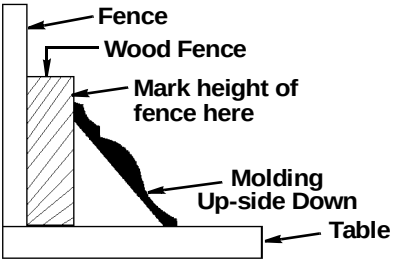
Cutting Crown Molding Angled to the Table and Fence

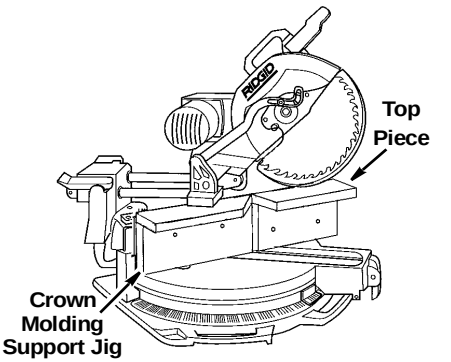
The advantage of cutting crown molding in this position is that no bevel setting is required. Small changes in the miter angle can be made without affecting the bevel angle. When using this method the saw can be quickly and easily adjusted for corners that are not 90° (square).

Making a crown molding support jig:

A crown molding support jig needs to be constructed to help hold the molding in place during this cutting operation.

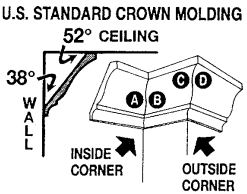
1. Get a straight piece of wood typically 1/2 inch thick by 23-1/2 inches long (28 inches long if using the table extension) and approximately 5 inches wide. The actual width of this piece will depend on overall width of the crown molding and what the top and bottom angles are.
2. Drill holes and temporarily mount this piece similar to building an Auxiliary Fence. However, do not cut the blade slot at this time.
3. Position a piece of crown molding that you are going to cut so the bottom part (part which is installed against the wall) is against the wood fence. Make sure the angles on the crown molding are held firmly against the wood fence and table of the miter saw. Mark the height on the fence.
4. Remove the wood fence and cut to this width.
5. Use small nails and glue to attach a top piece (typically 1/2 inch thick by 1-1/2 inches wide by 23 inches long. Make sure the nails are not located below the sawblade.
6. Securely reattach the completed jig to the miter saw fence and make a full depth, 45° left and right miter cut.

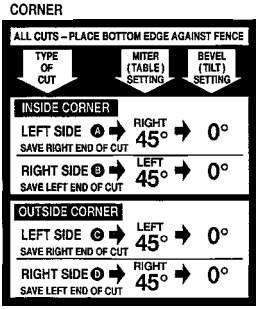




Using the crown molding support jig:

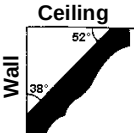
1. Position the molding so the bottom (part which is installed against the wall) is against the wood fence.
2. Use the chart to select the proper miter angle. Tighten the miter lock knob.
3. Activate switch. Lower head, make the cut. Wait until the blade comes to a complete stop before allowing the head assembly to return to the “UP” position and/or removing the workpiece.
4. ALWAYS PRETEST COMPOUND SETTINGS ON SCRAP MATERIAL TO CONFIRM CORRECT ANGLE.





Basic Saw Operations (continued)

Compound Miter Saw
Miter and Bevel Angle Settings
Wall to Crown Molding Angle: 52/38 degrees

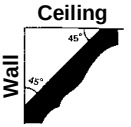


Wall Angle (deg.)	Bevel Angle (deg.)	Miter Angle (deg.)
60	43.0	46.8
61	42.8	46.3
62	42.5	45.7
63	42.2	45.1
64	41.9	44.6
65	41.7	44.0
66	41.4	43.5
67	41.1	42.9
68	40.8	42.4
69	40.5	41.9
70	40.2	41.3
71	39.9	40.8
72	39.6	40.3
73	39.3	39.2
74	39.0	39.2
75	38.7	38.7
76	38.4	38.2
77	38.1	37.7
78	37.8	37.2
79	37.4	36.8
80	37.1	36.3
81	36.8	35.8
82	36.5	35.3
83	36.2	34.8
84	35.8	34.4
85	35.5	33.9
86	35.2	33.4
87	34.9	33.0
88	34.5	32.5
89	34.2	32.1
90	33.9	31.6
91	33.5	31.2
92	33.2	30.7
93	32.8	30.3
94	32.5	29.9
95	32.2	29.4
96	31.8	29.0
97	31.5	28.6
98	31.1	28.2
99	30.8	27.7
100	30.4	27.3

Wall Angle (deg.)	Bevel Angle (deg.)	Miter Angle (deg.)
101	30.1	26.9
102	29.7	26.5
103	29.4	26.1
104	29.0	25.7
105	28.7	25.3
106	28.3	24.9
107	28.0	24.5
108	27.6	24.1
109	27.2	23.7
110	26.9	23.3
111	26.5	22.9
112	26.1	22.6
113	25.8	22.2
114	25.4	21.8
115	25.0	21.4
116	24.7	21.0
117	24.3	20.7
118	23.9	20.3
119	23.6	19.9
120	23.2	19.6
121	22.8	19.2
122	22.5	18.8
123	22.1	18.5
124	21.7	18.1
125	21.3	17.8
126	21.0	17.4
127	20.6	17.1
128	20.2	16.7
129	19.8	16.4
130	19.5	16.0
131	19.1	15.7
132	18.7	15.3
133	18.3	15.0
134	17.9	14.6
135	17.6	14.3
136	17.2	14.0
137	16.8	13.6
138	16.4	13.3
139	16.0	13.0
140	15.6	12.8

Wall Angle (deg.)	Bevel Angle (deg.)	Miter Angle (deg.)
141	15.3	12.3
142	14.9	12.0
143	14.5	11.6
144	14.1	11.3
145	13.7	11.0
146	13.3	10.7
147	12.9	10.3
148	12.5	10.0
149	12.2	9.7
150	11.8	9.4
151	11.4	9.0
152	11.0	8.7
153	10.8	8.4
154	10.2	8.1
155	9.8	7.8
156	9.4	7.5
157	9.0	7.1
158	8.6	6.8
159	8.3	6.5
160	7.9	6.2
161	7.5	5.9
162	7.1	5.6
163	6.7	5.3
164	6.3	4.9
165	5.9	4.6
166	5.5	4.3
167	5.1	4.0
168	4.7	3.7
169	4.3	3.4
170	3.9	3.1
171	3.5	2.8
172	3.2	2.5
173	2.8	2.2
174	2.4	1.8
175	2.0	1.5
176	1.6	1.21
177	1.2	0.9
178	0.8	0.6
179	0.4	0.3
180	0.0	0.0

Wall to Crown Molding Angle: 45 degrees



Wall Angle (deg.)	Bevel Angle (deg.)	Miter Angle (deg.)
60	37.8	50.8
61	37.5	50.2
62	37.3	49.6
63	37.1	49.1
64	36.8	48.5
65	36.6	48.0
66	36.4	47.4
67	36.1	46.9
68	35.9	46.4
69	35.6	45.8
70	35.4	45.3
71	35.1	44.8
72	34.9	44.2
73	34.6	43.7
74	34.4	43.2
75	34.1	42.7
76	33.9	42.1
77	33.6	41.6
78	33.3	41.1
79	33.1	40.6
80	32.8	40.1
81	32.5	39.6
82	32.3	39.1
83	32.0	38.6
84	31.7	38.1
85	31.4	37.7
86	31.1	37.2
87	30.9	36.7
88	30.6	36.2
89	30.3	35.7
90	30.0	35.3
91	29.7	34.8
92	29.4	34.3
93	29.1	33.9
94	28.8	33.4
95	28.5	32.9
96	28.2	32.5
97	27.9	32.0
98	27.6	31.6
99	27.3	31.1
100	27.0	30.7

Wall Angle (deg.)	Bevel Angle (deg.)	Miter Angle (deg.)
101	26.7	30.2
102	26.4	29.8
103	26.1	29.4
104	25.8	28.9
105	25.5	28.5
106	25.2	28.1
107	24.9	27.6
108	24.6	27.2
109	24.2	26.8
110	23.9	26.3
111	23.6	25.9
112	23.3	25.5
113	23.0	25.1
114	22.7	24.7
115	22.3	24.3
116	22.0	23.8
117	21.7	23.4
118	21.4	23.0
119	21.0	22.6
120	20.7	22.2
121	20.4	21.8
122	20.0	21.4
123	19.7	21.0
124	19.4	20.6
125	19.1	20.2
126	18.7	19.8
127	18.4	19.4
128	18.1	19.0
129	17.7	18.6
130	17.4	18.2
131	17.1	17.9
132	16.7	17.5
133	16.4	17.1
134	16.0	16.7
135	15.7	16.3
136	15.4	15.9
137	15.0	15.6
138	14.7	15.2
139	14.3	14.8
140	14.0	14.4

Wall Angle (deg.)	Bevel Angle (deg.)	Miter Angle (deg.)
141	13.7	14.1
142	13.3	13.7
143	13.0	13.3
144	12.6	12.9
145	12.3	12.6
146	11.9	12.2
147	11.6	11.8
148	11.2	11.5
149	10.9	11.1
150	10.5	10.7
151	10.2	10.4
152	9.8	10.0
153	9.5	9.6
154	9.2	9.3
155	8.8	8.9
156	8.5	8.5
157	8.1	8.2
158	7.8	7.8
159	7.4	7.5
160	7.1	7.1
161	6.7	6.7
162	6.4	6.4
163	6.0	6.0
164	5.6	5.7
165	5.3	5.3
166	4.9	5.0
167	4.6	4.6
168	4.2	4.3
169	3.9	3.9
170	3.5	3.5
171	3.2	3.2
172	2.8	2.8
173	2.5	2.5
174	2.1	2.1
175	1.8	1.8
176	1.4	1.4
177	1.1	1.1
178	0.7	0.7
179	0.4	0.4
180	0.0	0.0

Laser System

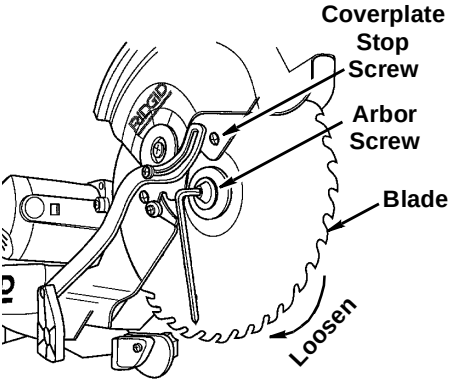
Mounting the Laser System

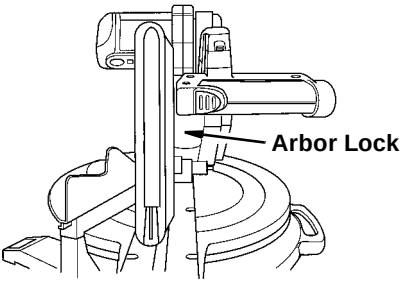
WARNING: To reduce the risk of injury from unexpected starting, unplug the saw whenever you are removing or installing the blade.

NOTE: See “Installing or Removing Blade” section of this manual for more information.

1. Unplug the saw from the outlet.
2. Rotate the lower plastic guard by hand. Loosen, but do not remove, the cover plate stop screw using the Phillips end of combination wrench.
3. Lift the lower guard up and tilt the lower guard assembly back so the arbor screw is exposed.
4. Find the arbor lock between the upper guard and the miter saw handle. Fit 1/4" hex end of combination tool in arbor screw or use 1/2" box end wrench.
5. Press the arbor lock and hold it firmly while turning the wrench clockwise. The arbor lock will engage after some turning of the wrench.

NOTE: The arbor screw has a left hand thread. This helps prevent unwanted loosening of the arbor screw during normal operation.





6. Remove the arbor screw, arbor washer, and **outer** blade collar.

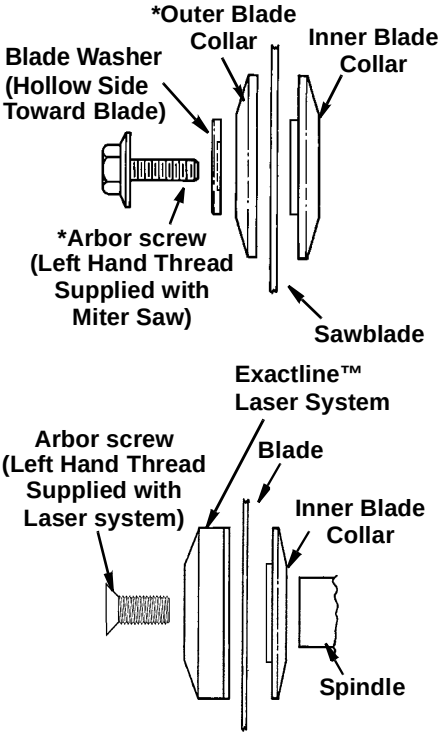
NOTE: The Exactline™ Laser System will replace the outer blade collar. Retain the outer blade collar, arbor screw and blade washer to operate the saw when the laser system is not mounted.

7. Place the laser system onto the saw arbor, aligning the double "D" flats in the laser system with the flats on the arbor. Press the arbor lock and turn the combination wrench counterclockwise to secure the blade. Tighten arbor screw using moderate force, but do not overtighten.
8. Lower the lower blade guard until the slot in cover plate rests all the way down on the cover plate stop screw. Tighten the screw with the Phillips end of the combination wrench.

DANGER: Never use the saw without guard cover plate securely in place. It keeps the arbor screw from falling out if it accidentally loosens, and prevents the spinning blade from coming off the machine.

9. Be sure the arbor lock is released so the blade turns freely.

NOTE: The arbor lock can be damaged by improper use. If the arbor lock will not hold, lower the blade down on to a scrap piece of wood positioned against the fence. This will serve as an alternate locking means.



***Keep these items for use if laser system is removed**

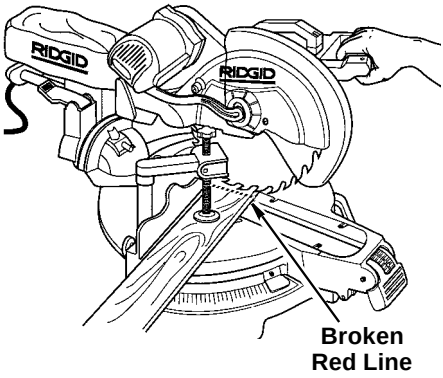
Operation

DANGER: Laser radiation. Avoid direct eye exposure.

When the saw is “ON” and the blade is in its highest position, the laser system will show up on your workpiece as a red colored broken line. This red broken line will assist you in lining up the cut mark on the workpiece with the blade for accurate cuts.

1. Position your workpiece on the saw. Make sure the blade is at its highest position.
2. Turn the saw “ON” and a broken red line will appear on your workpiece.
3. Align this red line with the cut-off mark on the workpiece.
4. Lower the sawblade and make the cut. As the blade gets closer to the workpiece the broken red line will become solid. Do not move the workpiece.
5. Turn the saw “OFF” and allow the blade to come to a complete stop before raising.

Practice cuts will let you become familiar with correctly lining the laser mark up with the cut-off mark and blade.



Changing Batteries

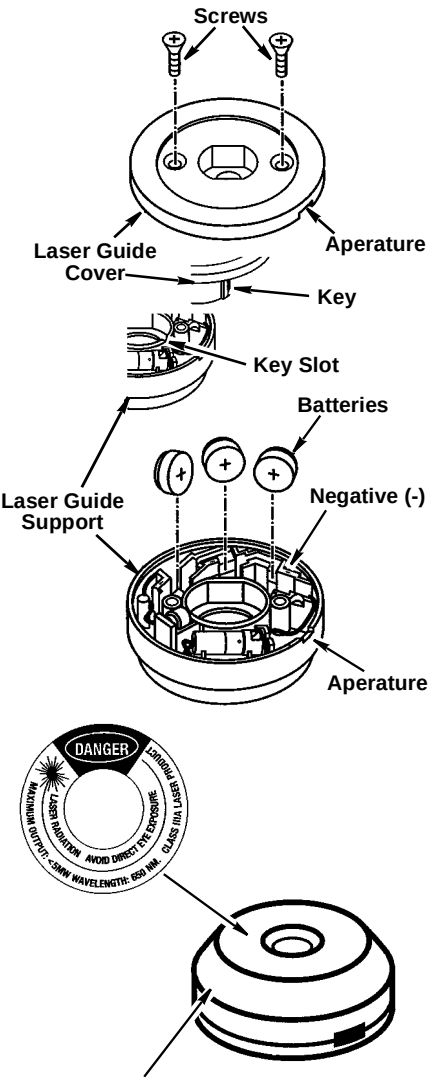
WARNING: To reduce the risk of injury from unexpected starting, unplug the saw whenever you are removing or installing the blade.

1. Remove the Exactline™ Laser System from the saw.
2. Remove the two Phillips screws on the back side of the laser system and take off the back cover.
3. Remove the three batteries with a non-conductive device (toothpick).
4. Use a soft paintbrush to gently and carefully clean all sawdust from the laser system.
5. Insert the new batteries. Replacement batteries must have a rating of 1.5 volt and 100 mah (milliampere hour) minimum. Number 76 series or equivalent.

DANGER:

- **Laser radiation when open and interlock defeated.**
- **Do not attempt to activate the laser.**
- **Avoid direct eye contact.**
- **The laser is activated by means of a centrifugal switch only while the saw motor is running and the laser system is mounted on the saw.**

6. Replace the back cover and secure with two Phillips screws.



DANGER: Laser radiation when open and interlock defeated. AVOID DIRECT EYE EXPOSURE.

Maintenance

DANGER: Never put lubricants on the blade while it is spinning.

WARNING: To reduce the risk of injury from unexpected starting or electrical shock, unplug the power cord before working on the saw.

WARNING: For your safety, this saw is double insulated. To avoid electrical shock, fire or injury, use only parts identical to those identified in the parts list. Reassemble exactly as original assembly to avoid electrical shock.

Replacing Carbon Brushes

The carbon brushes furnished will last approximately 50 hours of running time or 10,000 on/off cycles. Replace both carbon brushes when either has less than 1/4" length of carbon remaining. To inspect or replace brushes, first unplug the saw. Then remove the black plastic cap on the side of the motor (caution, this cap is spring loaded by the brush assembly). Then pull out the brush. Repeat for the other side. To reassemble reverse the procedure. The ears on the metal end of the brush assembly go in the same hole the carbon part fits into. Tighten the cap snugly but do not overtighten.

NOTE: To reinstall the same brushes, first make sure the brushes go back in the way they came out. Otherwise a break-in period will occur that will reduce motor performance and increase brush wear.

Lower Blade Guard

Do not use the saw without the lower guard. The lower blade guard is attached to the saw for your protection. Should the lower guard become damaged, do not use the saw until damaged guard has been replaced. Develop a regular check to make sure the lower guard is working properly. Clean the lower guard of any dust or build up with a damp cloth.

CAUTION: Do not use solvents on the guard. They could make the plastic "cloudy" and brittle.

WARNING: When cleaning lower guard unplug the saw from the outlet to avoid unexpected start-up.

Periodically, sawdust will accumulate under the work table and base. This could cause difficulty in the movement of the work table when setting up a miter cut. Frequently blow out or vacuum up the sawdust.

WARNING: If blowing sawdust, wear proper eye protection to keep debris from blowing into eyes.

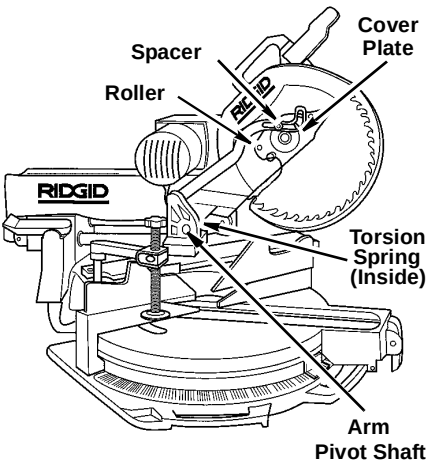
Lubrication

Ball Bearings

All the motor bearings in this tool are lubricated with a sufficient amount of high grade lubricant for the life of the unit, therefore, no further lubrication is required.

Infrequent Lubrication as Required

1. Apply automotive type oil directly on slide tubes. It will be picked up and dispersed by built in felt wicks.
2. Apply a light oil or a pressurized light spray oil to the arm pivot shaft.
3. Apply a light oil or a pressurized light spray oil to the torsion spring as shown.
4. Apply a light oil or a pressurized light spray oil to the lower guard spacer, roller and cover plate as shown.

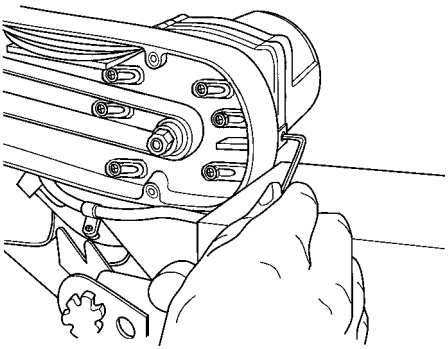


Motor Belt Tension

The motor belt tension was properly adjusted at the factory. However, to check the belt tension:

1. Use a Phillips screwdriver to remove the five screws holding the belt cover and remove the cover.
2. To check the belt tension squeeze the belt. Using light pressure the belt should deflect approximately 1/4".
3. To adjust the tension:
   a. Use a Phillips screwdriver to loosen (but do not remove) the six motor mount screws.
   b. To increase the belt tension turn the adjusting socket head set screw clockwise. To decrease the tension turn the adjusting set screw counterclockwise.

   NOTE: Excessive belt tension will cause the motor to fail prematurely.
   c. Securely tighten the six motor mount screws.
4. Replace the belt cover.



Accessories

Recommended Accessories

Item **SKU No.**

Miter Saw Utility Vehicle AC9940

Do not use any accessory unless you have received and read complete instructions for its use.

WARNING: To reduce the risk of injury from unsafe accessories, use only accessories recommended.

Basic Blade Requirements

12" Diameter

1" Diameter Arbor Hole

Blades marked for slide compound miter saw use

Blades marked for 4,500 RPM or higher

Prohibited Accessories

WARNING: The use of any cutting tool except 12" saw blades which meet the requirement under recommended accessories is prohibited. Do not use accessories such as shape cutters or dado sets. Metal cutting and the use of abrasive wheels are prohibited. See WARNING and CAUTION notes in the "Safety Instructions for Basic Saw Operations" section.

Using Carbide Tipped Blades

WARNING: To avoid the risk of cutting tool failure and thrown shrapnel (broken pieces of blade) read and understand all the warnings and instructions which come with carbide tipped blades. Failure to heed all carbide tipped blade warnings and safety instructions can result in serious injury.

Carbide is a very hard but brittle material. Take care when mounting, using and storing carbide blades to prevent accidental damage. Slight shocks, such as striking a tip during handling, can seriously damage the blade. Foreign objects in the workplace, such as wire or nails, can also cause tips to crack or break off.

Before using a carbide tipped blade, always examine the blade and tips for damage. Look for bent teeth, a bent blade, cracks, broken, missing or loose carbide tips. Do not use a carbide tipped blade if damage is found or suspected.

Do not use a carbide tipped blade without all appropriate guards in place.

Mount blade securely in proper rotation direction.

Never rotate a carbide tipped blade faster than its maximum recommended speed.

Troubleshooting Guide

General

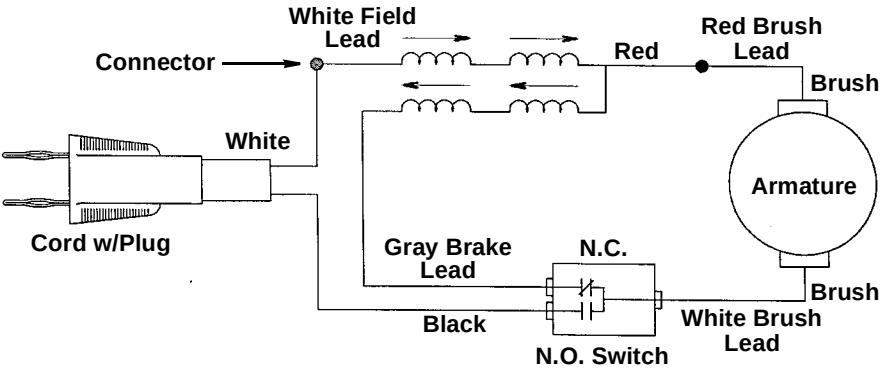
Problem	Probable Cause	Suggested Corrective Action
Blade hits table.	1. Misalignment	1. Get authorized Service.
Angle of cut not accurate.	1. Misalignment	1. See “Alignment” section.
Can’t move miter adjustment	1. Sawdust under table	1. Vacuum or blow out dust. Wear Eye Protection.
Power head wobbles.	1. Loose pivot points	1. See Bevel Pivot Adjustment in “Alignment” section.
Power head won’t fully rise or blade guard won’t fully close	1. Lubrication needed 2. Part failure 3. Pivot spring or guard spring not replaced properly after service 4. Sawdust sticking to stops	1. See “Lubrication” section. 2. Get authorized Service. 3. Get authorized Service. 4. Inspect/clean stops.
Blade binds, jams, burns wood. Rough cuts	1. Improper operation 2. Dull blade 3. Improper blade 4. Bent blade - check flatness across expansion slots on blade	1. See “Basic Saw Operation” section. 2. Replace or sharpen blade. 3. Replace with 12” diameter blade designed for the material being cut. 4. Replace blade.
Tool vibrates or shakes	1. Sawblade not round 2. Sawblade damaged 3. Sawblade loose 4. Other	1. Replace blade. 2. Replace blade. 3. Tighten arbor screw. 4. Get authorized Service.
Power head hard to pull/push down	1. Lube needed	1. See - “Lubrication” section.

Troubleshooting Guide (continued)

Motor

Problem	Probable Cause	Suggested Corrective Action
Brake does not stop blade within 6 seconds.	1. Brushes not seated or lightly sticking. 2. Motor brake winding overheated from use of prohibited accessory or rapid on/off cycling. 3. Arbor screw loose. 4. Other	1. Inspect/clean/replace brushes. See “Maintenance” section. 2. Use only recommended blades/accessories. Let motor cool down. 3. Retighten 4. Get authorized service. See “Troubleshooting of brake” section.
Motor does not start.	1. Fuse. 2. Brushes worn. 3. Other.	1. Check fuse, or circuit breaker. 2. See “Maintenance” section. 3. Get authorized service.
Brush sparking when switch released.	1. Normal automatic brake working properly.	1. None

Wiring Diagram

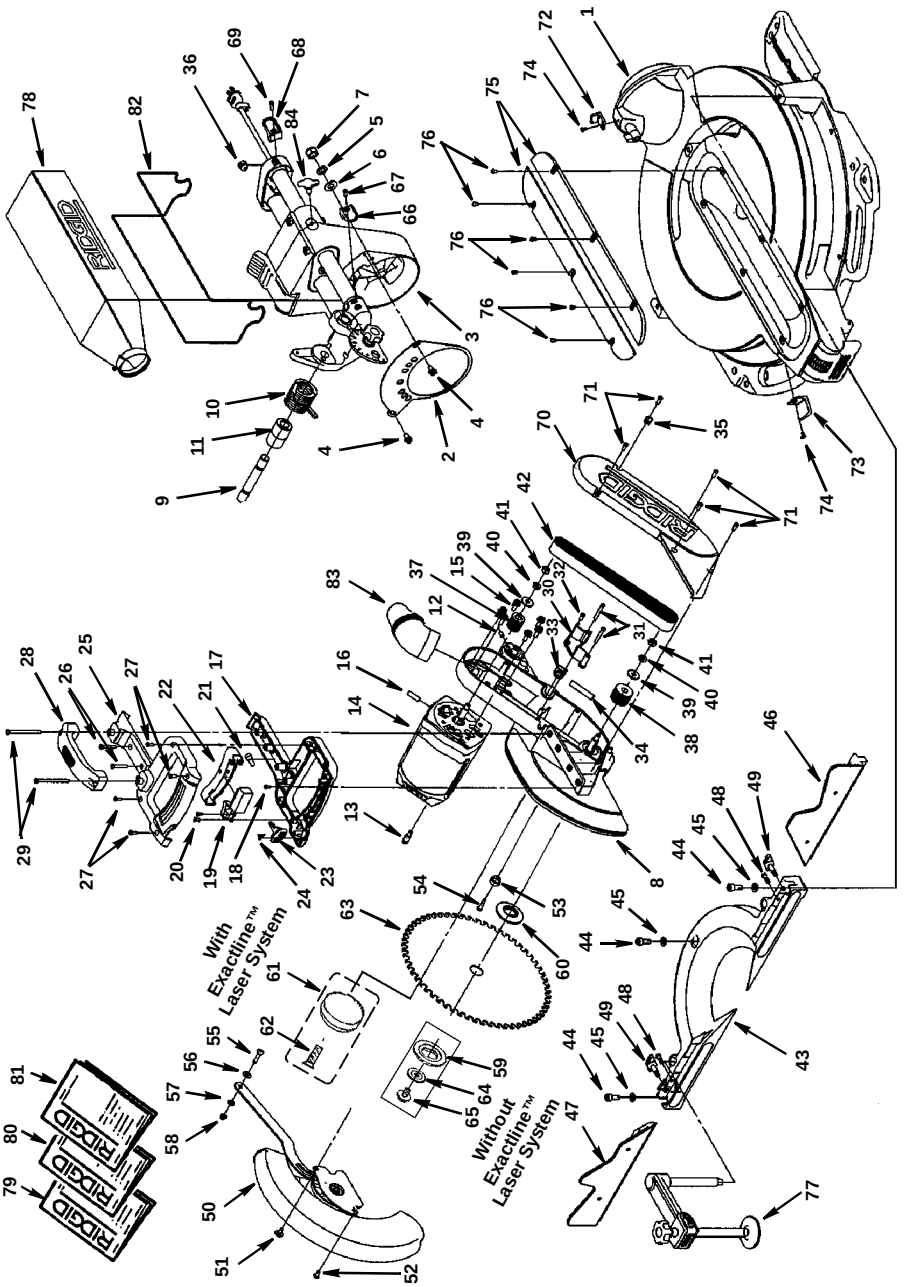


Trouble Shooting of Brake by Qualified Service Person Only

1. Check commutation at no load. If there is a heavy sparking which follows the curvature of the commutator: replace the armature.
2. To continue trouble shooting, now unplug the power cord.
3. Install service brushes, especially if delayed come-in of brake has been noticed before failure.
4. Check brake circuit for continuity: remove brush caps and brushes. Use ohmmeter to check continuity from brass brush holder to brush holder. If open, locate exact place using ohmmeter. As indicated by test, tighten connection or replace field assembly or replace switch.
5. After repair, check direction of blade rotation vs. guard arrow.

Notes

Parts List For RIDGID 12" Slide Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 1



Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 1
Always order by part number - not by key number

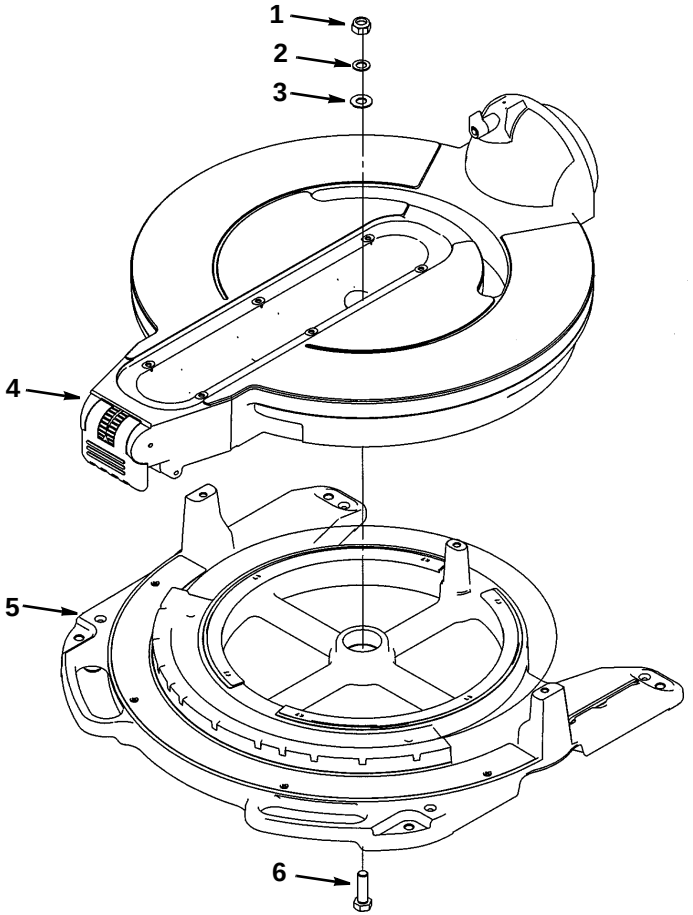
Key No.	Part No.	Description
1	830122	Base/Table Asm (See Fig. 2)
2	830008	Scale, Bevel
3	830007	Pivot Asm (See Fig. 5)
4	830009	* Screw, M6 x 1.0 x 12
5	828117	* Washer,12.2 x 22 x 2
6	819179	* Washer, Spring 12.7 x 22 x 0.33
7	818656	Nut, Lock
8	830022	Arm Guard Asm (See Fig. 8)
9	823344	Shaft, Arm Pivot
10	830131	‡Spring, Torsion
11	830111	Spacer, Spring
12	828040	Screw, Set Lock M6 x 10
13	830023	Pin, Up Stop
14	830024	Motor Asm (See Fig. 10)
15	830025	* Screw M6 x 16
16	830164	Screw, Set Lock M8 x 25
17	830037	Handle, Lower
18	813312	Screw, Pan Hd M4 x 10
19	823494	• Switch
20	828122-1	* Screw, Pan Hd Ty E M4 x 10
21	803709-1	• Connector, Wire
22	828059	Actuator, Switch
23	828060	Button, Lock
24	828061	Spring, Torsion
25	830039	Handle, Upper
26	830123	Screw, Sems M5 x 32
27	828122	Screw, Wash Hd Plastite M4-14
28	828063	Handle, Carry
29	830123-1	Screw, Sems M5 x 75
30	830035	Cover, Cord
31	830124	* Screw, Pan Hd M5 x 35
32	816755-3	* Screw, Pan Cr M5 x 0.8-12
33	816725	Clamp, Cord
34	830264	Sleeve, Cord
35	830125	Clip, Cord
36	830148	Strain Relief
37	830026	Pulley, Motor
38	830033	Pulley, Pinion
39	821063	* Washer 8 x 23 x 2
40	813303-7	* Lockwasher, M8
41	820236-7	* Nut, Hex Lock M8 x 1.25 x 6.5
42	830034	Belt, Poly, Vee
43	830002	Fence, Lower
44	830129	Screw, Soc Cap M8 x 1.25 x 20
45	821063-6	* Washer 8 x 16 x 1.2
46	830005	Fence, Right Sliding
47	830006	Fence, Left Sliding
48	820244-6	* Screw, Pan Hd M6 x 20
49	830004	Knob, Fence Lock
50	830040	Guard Asm, Lower (See Fig. 9)
51	821873	Screw, Shoulder 10-32 x 1/2
52	809372-3	* Screw, Pan Hd 10-32 x 1/2
53	827498	Sleeve, Rubber
54	821878	Screw, Shoulder, 10-32 x 7/8
55	821875	Screw, Shoulder, M6 x 22
56	821063-1	* Washer 8 x 16 x 0.5
57	820238-5	* Washer 6.5 x 13 x 0.8
58	817449-1	* Nut, Hex Lock M6 x 1.0
59	830524	Collar, Blade (Outer)
60	830526	Collar, Blade (Inner)
61	830527	Exactline™ Laser System
62	830522	Screw Blade (Used w/Key 61 Only)
63	830000	Blade
64	816720	Washer, Blade
65	823351	Screw, Blade(Use W/Key 59 Only)
66	830016	Wrap, Cord Front
67	830124-2	* Screw, Pan Hd M5 x 15
68	830017	Wrap, Cord Rear
69	830124-3	* Screw, Pan Hd M5 x 20
70	830036	Cover, Belt
71	830124-2	* Screw, Pan Hd M5 x 15
72	829994	Indicator, Bevel
73	829995	Indicator, Miter
74	830130-1	Screw, Sems Pn Cr L+F Wash M4 x 8
75	829989	Insert, Table
76	816755-10	* Screw, Pan Cr M5 x 8
77	830079	Clamp Asm
78	830077	Bag Dust Asm
79	SP6505	Owners, Manual
80	SP6505S	Owners, Manual, Spanish
81	SP6505F	Owners, Manual, French
82	830076	Frame, Dust Bag
83	830078	Elbow, Dust
84	830015	Knob, Slide Lock

* Standard Hardware Item - May be purchased locally.

‡ CAUTION: See mechanical assembly caution on page 56.

• WARNING: See electrical warning on page 58.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 2 - Base/Table Assembly

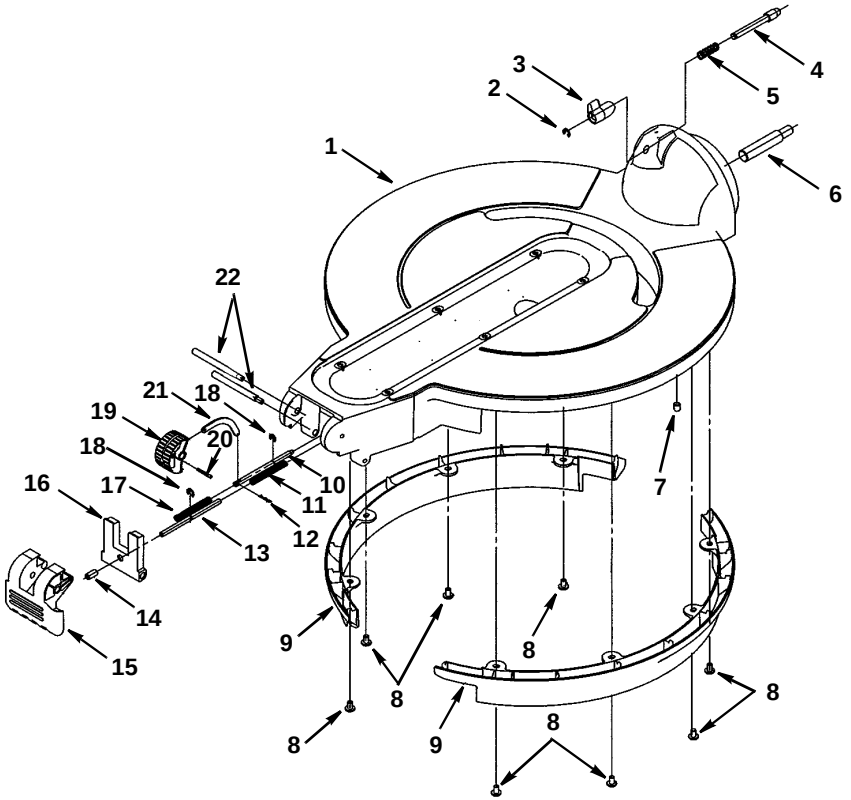


Always order by part number - Not by key number

Key No.	Part No.	Description
1	818656	* Nut, Hex Lock M12 x 1.75
2	830137	* Washer, M12 x 20 x 1.5
3	830138	* Washer, M12 x 25 x 1.5
4	829981	Table Asm (See Fig. 3)
5	830136	Base Asm (See Fig. 4)
6	822072	* Screw Hx Hd M12 x 1.75-40

* Standard Hardware Item - May be purchased locally.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 3 - Table Assembly

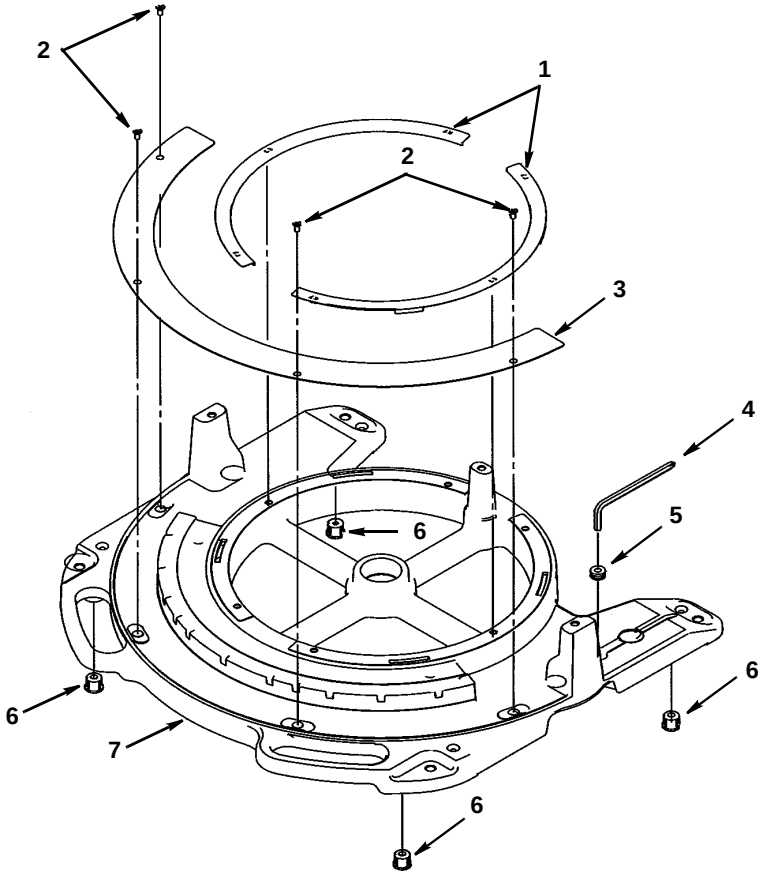


Always order by part number - Not by key number

Key No.	Part No.	Description
1	830280	Table Asm (Includes Key No. 6)
2	829984-1	Ring, Retaining
3	829992	Lever, Bevel Index
4	829990	Pin, Bevel Index
5	829991	Spring
6	—	Shaft, Pivot
7	827449-1	Screw, Set Lock M8 x 1.25 x 10 Nylock
8	820244-2	* Screw, Pan Cr M6 x 1.0 x 10
9	829982	Skirt, Table
10	830044	Pin, Miter Index
11	829983	Spring
12	830141	Pin, Roll R6
13	829985	Pin, Miter Lock
14	827449	Screw, Set Lock M8 x 1.25 x 16 Nylock
15	829988	Lever, Miter Lock
16	829986	Plate, Miter Lock
17	829983	Spring
18	829984	Ring, Retaining
19	830046	Wheel, Miter Index
20	830140	Pin, Roll 3 x 25.2
21	830045	Link, Miter Index
22	829987	Screw, Shoulder M6 x 8 x 91

* Standard Hardware Item - May be purchased locally.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 4 - Base Assembly

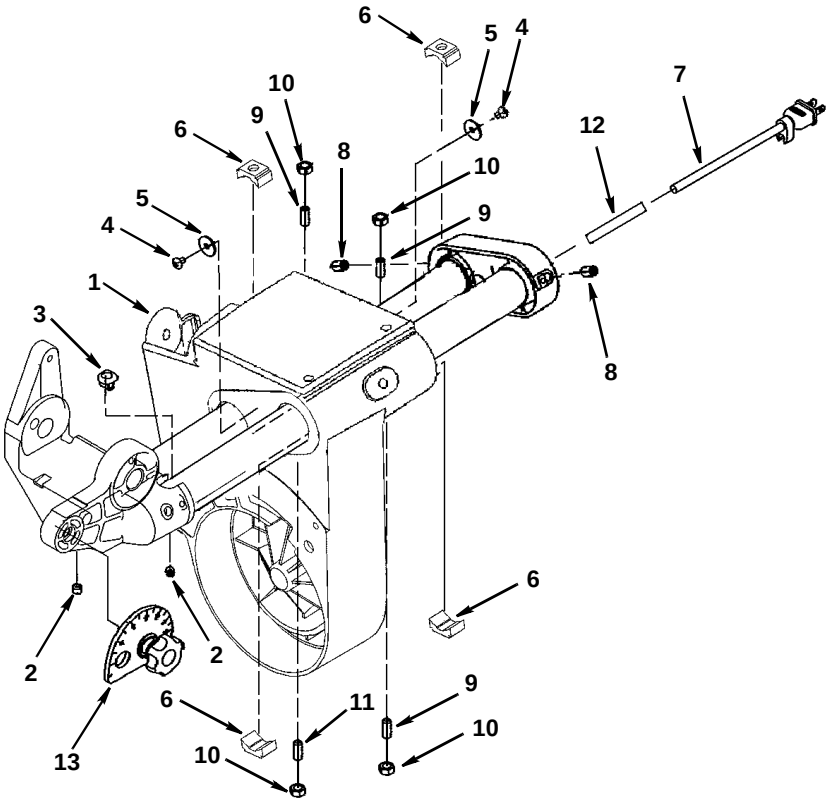


Always order by part number - Not by key number

Key No.	Part No.	Description
1	829997	Shim, Table
2	830166	* Screw, Flat M5 x 0.8 x 10
3	829999	Scale, Miter
4	823492	Wrench Hex “L” .25 x 120mm
5	823335	Grommet, Wrench
6	829998	Foot, Rubber
7	829996	Base

* Standard Hardware Item - May be purchased locally.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 5 - Pivot Assembly



Always order by part number - Not by key number

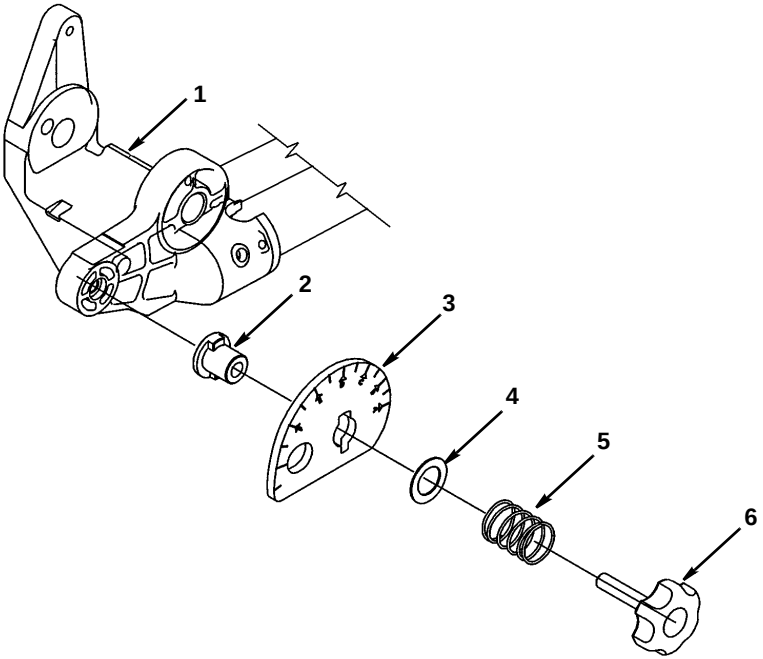
Key No.	Part No.	Description
1	830262	Pivot Asm Only (Other Items Listed on Chart Not Included)
2	830146	Screw, Set Lock M8 x 1.25 x 6 Nylock
3	830147	Guard, Cord
4	830145	Screw, Shoulder M5
5	830053	Washer, Rubber
6	830048	Glide Tube
7	830038	• Cord w/Plug

Key No.	Part No.	Description
8	830146-1	Screw, Set Lock M8 x 1.25 x 14 Nylock
9	830144-1	Screw, Set Lock M8 x 1.25 x 20
10	824026-7	* Nut, Hex M8 x 1.25
11	830144	Screw, Set Lock M8 x 1.25 x 25
12	830264-1	Sleeve, Cord
13	—	Tube Pivot Asm (See Fig. 6)

* Standard Hardware Item - May be purchased locally.

• WARNING: See electrical warning on page 54.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 6 - Tube Pivot Assembly

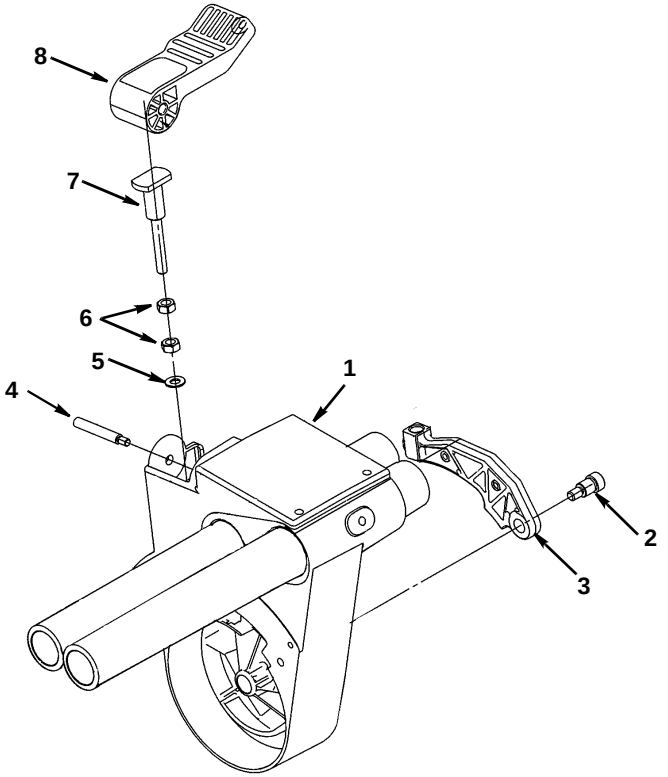


Always order by part number - Not by key number

Key No.	Part No.	Description
1	—	Pivot Asm. (See Fig. 5)
2	830018	Bearing, Flange Down Stop
3	830019	Eccentric, Plate
4	830149	* Washer, 0.63 x 25 x 1/32
5	830020	Spring
6	830021	Knob, Down Stop

* Standard Hardware Item - May be purchased locally.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 7 - Pivot Sub Assembly

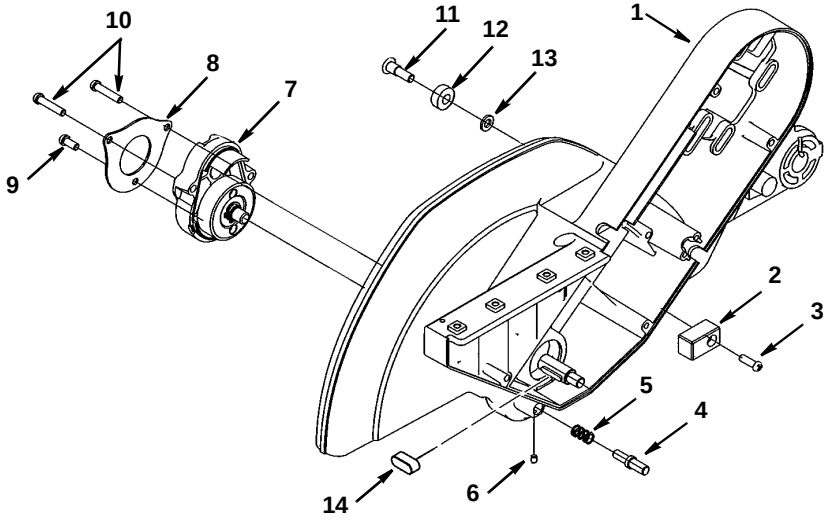


Always order by Part Number - Not by Key Number

Key No.	Part No.	Description
1	—	Pivot Asm. (See Fig. 5)
2	830151	Screw, Shoulder M6
3	830010	Clamp, Bevel
4	830011	Screw, Shoulder M8 x 1.25 x 58.5
5	821063-7	* Washer, 8 x 16 x 1.2
6	820236-7	* Nut, Hex M8 x 1.25
7	830012	Plunger, Bevel Lock
8	830013	Lever, Bevel Lock

* Standard hardware item - May be purchased locally.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 8 - Arm Guard Assembly ‡



Always order by part number - Not by key number

Key No.	Part No.	Description
1	830225	Arm Guard Asm
2	823360	Bumper, Lower Guard
3	816755-6	Screw, Pan Cr M5 x 16
4	830029	Pin, Arbor Lock
5	830030	• Spring
6	830155	Screw, Set Lock M4 x 5 Nylock
7	830031-2	Arbor Asm
8	830032	Retainer Bearing
9	830154-1	Screw, Sems M5 x 12
10	830154	Screw, Sems M5 x 25
11	821875-1	* Screw M6 x 1.0-14
12	821862	Bearing
13	820238-2	* Washer M6 x 12 x 1.6
14	830027	Key 4 x 4 x 20

* Standard hardware item - May be purchased locally.

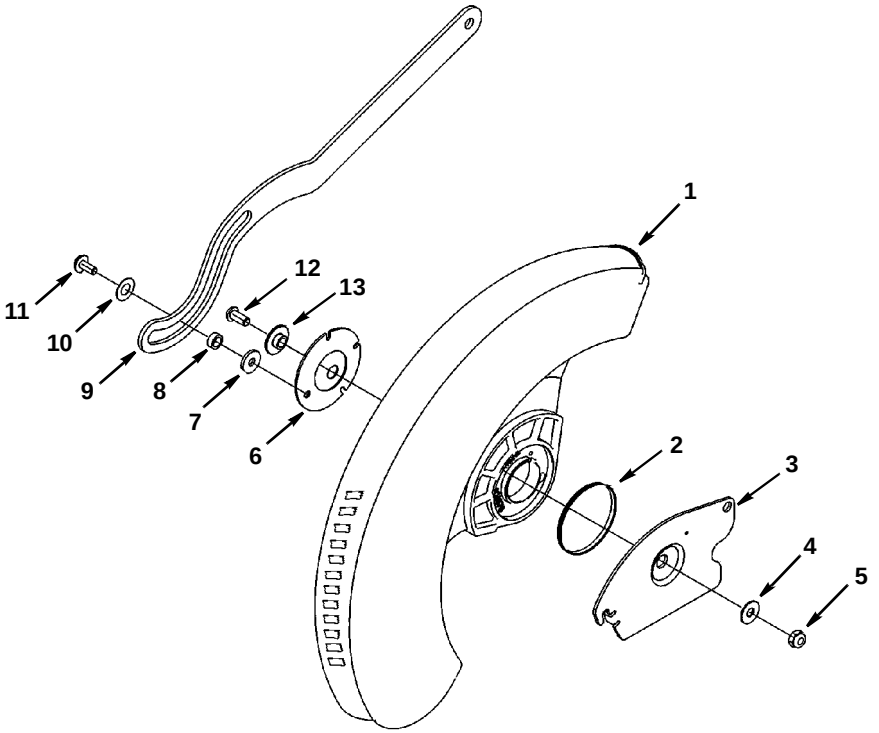
‡ CAUTION: See Mechanical Assembly Caution below.

• WARNING: Uncontrolled spring release or misinstallation of these parts may create a Hazard unless repair is done by a qualified service technician.

CAUTION: Mechanical Assembly, to qualified service technician.

1. **Wear approved eye protection when working with coil springs including spring, arbor lock 830030.**
2. **Incorrect re-assembly of torsion spring 830111 can cause an unsafe condition because cutting head fails to rise fully to stop, or because spring fails through over-stress.**
3. **Improper reassembly of mechanisms controlling movement of lower guard 830059 can cause an unsafe condition because guard fails to operate freely as cutting head is moved up and down.**

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS1290LZ 0
RIDGID parts are available on-line at www.ridgidparts.com
Figure 9 - Lower Guard Assembly ‡ •



Always order by part number - Not by key number

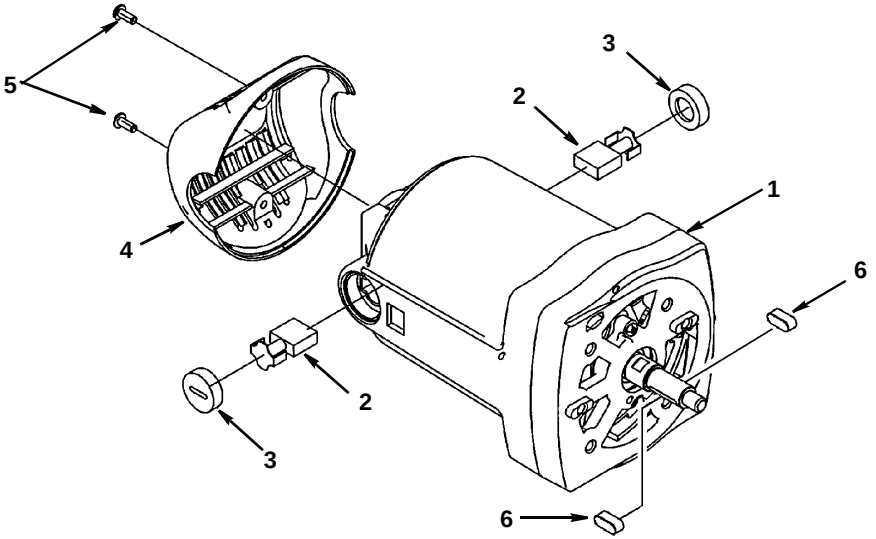
Key No.	Part No.	Description
1	830530	• Guard, Lower
2	816677	• Spring, Guard
3	830529	Pivot, Lower Guard
4	820238-8	Washer 1/4 x 16
5	817449-1	* Nut, Hex Lock M6 x 1.0
6	826879	Retainer, Guard
7	820732-2	* Washer 5.5 x 16 x 0.8
8	820725-01	Spacer
9	830041	Link, Actuator
10	820732-1	* Washer 7.5 x 16 x 0.6
11	820724	Screw, Shoulder M5
12	828142	* Screw, Flat Cr M6 x 13
13	827409	Bearing, Retainer

* Standard Hardware Item - May be purchased locally.

‡ CAUTION: See mechanical assembly caution on page 52.

• WARNING: See warning on page 56.

Parts List For RIDGID 12" Compound Miter Saw
Model No. MS12900
RIDGID parts are available on-line at www.ridgidparts.com
Figure 10 - Motor Assembly •



Always order by part number - Not by key number

Key No.	Part No.	Description
1	830253	Motor (Includes Key Nos. 2, 3, 4, 5)
2	816768	Brush
3	830250	Cover, Brush
4	828064	Cover, Rear Motor
5	828122-1	Screw, Wash Hd Cr M4-10
6	830027	Key 4 x 4 x 20

• WARNING: Any attempt to repair or replace electrical parts on this unit may create a hazard unless repair is done by a qualified service technician.

WARNING: For your safety, this miter saw is specially insulated. To reduce the risk of electrical shock, fire or injury, use only parts identical to those identified in the parts list. Reassemble exactly as originally assembled.

RIDGID® HAND HELD AND STATIONARY POWER TOOL LIMITED THREE YEAR WARRANTY AND 90 DAY SATISFACTION GUARANTEE POLICY

This product is manufactured under license from Ridgid, Inc. by One World Technologies, Inc.. All warranty communications should be directed to One World Technologies, Inc. at (toll free) 1-866-539-1710.

90-Day Satisfaction GuaranteePolicy

During the first 90 days after the date of purchase, if you are dissatisfied with the performance of this Ridgid® tool for any reason, you may return the tool to the dealer from which it was purchased for a full refund or exchange. To receive a replacement tool you must present proof of purchase and return all original equipment packaged with the original product. The replacement tool will be covered by the limited warranty for the balance of the three year warranty period.

What is covered under the Limited Three Year Warranty

This warranty covers all defects in workmanship or materials in this RIDGID® tool for the three year period from the date of purchase. This warranty is specific to this tool. Warranties for other RIDGID® products may vary.

How to obtain service

To obtain service for this RIDGID® tool you must return it, freight prepaid, to an authorized RIDGID® service center for hand held and stationary power tools. You may obtain the location of the authorized service center nearest you by calling (toll free) 1-866-539-1710 or by logging on to the RIDGID® website at www.ridgidwoodworking.com. When requesting warranty service, you must present the proof of purchase documentation, which includes a date of purchase. The authorized service center will repair any faulty workmanship, and either repair or replace any defective part, at our optioon at no charge to you.

What is not covered

This warranty applies only to the original purchaser at retail and may not be transferred. This warranty only covers defects arising under normal usage and does not cover any malfunction, failure or defect resulting from misuse, abuse, neglect, alteration, modification or repair by other than authorized RIDGID® service center for hand held and stationary power tools. One World Technoligies, Inc. makes no warranties, representations or promises as to the quality or performance of its power tools other than those specifically stated in this warranty.

Additional Limitations

To the extent permitted by applicable law, all implied warranties, including warranties of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, are disclaimed. Any implied warranties, including warranties of merchantability or fitness for a particular purpose, that cannot be disclaimed under state law are limited to three years from the date of purchase. One World Technologies, Inc. is not responsible for direct, indirect, incidental or consequential damages. Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Catalog No. MS1290LZ
Model No. MS1290LZ0Serial No. _____
The model and serial numbers may be found on a plate attached to the saw at the rear of the miter saw base. You should record both model and serial number in a safe place for future use.

QUESTIONS OR COMMENTS?
CALL 1-866-539-1710
www.ridgidwoodworking.com
Please have your Model Number and Serial Number on hand when calling.

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Part No. SP6505 Form No. SP6505 Printed in Taiwan 4/03